Cost-effective Health Promotion and Hygiene Behaviour Change through Community Health Clubs

Juliet A.V. Waterkeyn

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ABSTRACT

Although safe sanitation and hygiene is critical for improving family health, rural communities in Sub Saharan Africa have shown little inclination to change their traditional behaviour, and sanitation coverage has now dropped to 47% (Cairncross 2003). With the Millennium Development Goals seeking to halve the 2.4 billion people without sanitation by the year 2015, there is an urgent need to find cost-effective health promotion strategies that will actively engage rural householders in modifying risky hygiene behaviour. This thesis evaluates an approach, developed over the past ten years in Zimbabwe, in which Community Health Clubs have successfully galvanised rural communities into active behaviour change leading to a strong demand for sanitation. In Tsholotsho District, after six months of weekly hygiene promotion sessions, at the cost of US 35c per beneficiary, good health knowledge of nine different topics was 47% higher in the intervention than for the control, and latrine coverage rose to 43% contrasted to 2% in the control area, with the remaining 57% members without latrines practicing faecal burial, a method previously unknown ($p>0.0001$). Spot observations of 736 Health Club households in two districts was contrasted to 172 in a control group, and showed highly significant changes in 17 key hygiene practices ($p>0.0001$) including hand washing. The study demonstrates that if a strong community structure is developed and the norms of a community are altered by peer pressure from a cyclical to linear world view, hygiene behaviour change will ensue and a demand for sanitation can be created. Maslow's Hierarchy of Needs (1954) is adapted to a rural context to analyse the qualitative data, providing some insight into the socio-cultural mechanisms at work. Despite adverse socio-economic conditions in Zimbabwe over the past five years, Health Clubs have flourished, providing a sustainable and cost-effective case study.

ACKNOWLEDGMENTS

This research was launched in response to the energy of Community Health Clubs members in Zimbabwe, whose enthusiastic uptake of this approach prompted a desire to ensure that their achievements were exposed others beyond our country. My hope is that this documentation of the Community Health Club approach may inspire others to use this process to ease the heavy domestic load of women in Africa and beyond.

I owe special thanks to my supervisor, Prof. Sandy Cairncross who took my practitioner's naïve enthusiasm and has for the past five years encouraged me on the academic route, enabling me to present my findings in this thesis, in a form which I hope will do credit to the hard working fieldworkers who have created this case study. For their dedication, despite the difficulties of keeping an NGO going in a time of deep crisis in Zimbabwe, I must mention George Nhunhama, as Acting Director of Zimbabwe AHEAD Organisation in my absence; Josephine Mutandiro, District Co-ordinator, for her innovative extension of the approach in the last five years in the Home Based Care Programme, and Andrew Muringanidza, Project Officer for his calm perseverance and technical support. In addition, Fungisai Mashawa, my research assistant, for patient data input, and for supervision of the enumerators; Brighton Gwata, Innocent Mpofu, and Abrahim Chapunza who spent long hours collecting the data.

Whilst many Government staff in the Rural District Councils have assisted in this intervention, Spiwe Mpofu, (Acting C.E.O) smoothed the way in Tsholotsho. The Ministry of Health in all six districts must take credit for the implementation of these projects, but I would like to mention in particular, Naboth Mawoyo (PEHO), for his initial support of the Community Health Club concept in 1995, as well as Mr Pise, (CEO), Mr Nyamandi, (DEHO) Mr Murima, and Mr Tandi (SEHOs) of Makoni District. The first Environmental Health Technicians to pioneer this methodology in the field, Caleb Mwaramba, Morgan Haiza, and Silas Gwengwe have inspired many others. In Tsholotsho, Mrs Moyo, and Mr Mpofu produced the most outstanding results in terms of health knowledge and behaviour change in their Community Health Clubs. I would also like to acknowledge the work of two EHTs who died prematurely: Micheck Chiwetu and Farayinesu Muzavazi. Grateful thanks are also due to DFID for funding the fieldwork during the first year and enabling this research to take place.

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Abbreviations

A.H.E.A.D.	Applied Health Education and Development
BVIP	Blair Ventilated and Improved Latrine
C.E.O.	Chief Executive Officer
CHC	Community Health Club
DANIDA	Danish International Development Agency
DEHO	District Environmental health Officer
DFID	Department for International Development
EHT	Environmental Health Technician
ESAP	Economic Structural Adjustment Programme
IRWSS	Integrated Rural Water Supply and Sanitation
N Ach	Need to Achieve (McClelland, 1984)
NGO	Non Governmental Organisation
MDGs	Millennium Development Goals
PHAST	Participatory Health and Sanitation Transformation from WSP-ESA
PhD	Pull Her Down Syndrome
PHE	Participatory Hygiene Education in Zimbabwe
PRA	Participatory Rural Appraisal
PROWESS	Promotion of the Role of Women in environmental Sanitation Services
RWSG-ESA	Regional Water and Sanitation Group, East and Southern Africa
SARAR	Self esteem, Associative Strength, Resourcefulness, Action-planning and Responsibility piloted by PROWESS under UNDP
SEHO	Senior Environmental Health Officer
UNDP	United Nations Development Programme
VIP	Ventilated and Improved Pit Latrine
WHO	World Health Organisation

Chapter 1: INTRODUCTION

1.1. What is health promotion?

The drive for health promotion began almost 30 years ago with a call internationally for 'Health for All by the Year 2000' (Alma-Ata, 1978). Five main themes stressed the importance of equity, community participation in decision-making, a multi-sectoral approach, appropriate technologies and an emphasis on health promotion activities (WHO, 1986). The guidelines called for changes in social structure and government policy, and required proactive promotion in the public domain. Health Promotion became an umbrella term to cover both the *individual* and the *structural* change that was required for effective improvement in health status of a 'community'. These ideas were reiterated in the Ottawa Charter (WHO, 1986) at the first International Conference on Health Promotion, which defined the concept as *'the process of enabling people to exert control over the determinants of health and thereby improve their health'* (Nutbeam, 1999b).

1.2. Different perspectives in health promotion

There is considerable debate as to the best approach for health promotion (Nutbeam, 1999a) despite the fact that many models have been proposed to understand the mechanism of behaviour change to induce people to co-operate (Lewin, 1935; Ajzen and Fishbein, 1980; Bandura, 1986). Health promotion in the developing world has been broadly divided between those who believe in long-term, horizontal initiatives with an emphasis on sustainability, as opposed to those who find a vertical approach, which only pinpoints a particular issue, is more viable because it is seen to achieve more immediate and quantifiable results (Cairncross et al., 1997) (See Section 2.3). The approach described in this intervention is positioned within the 'horizontal' Community Development paradigm, which emphasises capacity-building through a bottom-up approach, as a means to addressing the underlying determinants of health rather than the 'sticking plaster' approach that addresses the symptoms of a particular disease (Chambers, 1983).

1.3. The scale of the disease burden in Africa

In Africa there is an enormous burden of infectious disease, of which 28% is associated with diarrhoea, attributable to poor water supply, ineffective excreta disposal and poor household hygiene. It was estimated in 2004 that 288 million people in Sub Saharan Africa are still without improved drinking water, whilst 437 million lack basic sanitation (WHO / Unicef, 2004). In response to these gaps, the

United Nations Millennium Summit of 2000 listed safe drinking water and sanitation as being one of the eight key Millennium Development Goals (MDGs) with the target of halving the number of people without safe drinking water and improved sanitation facilities by the year 2015. Given current trends, Sub Saharan Africa is unlikely to achieve the targets envisaged by the MDGs in the next five years. The gap may be attributed to the fact that Sub Saharan Africa has the highest rate of population increase in the world with a 27.5% increase from 615 million to 784 million between 1990 and 2000. This population pressure, as well as political instability, conflict and poor maintenance of existing facilities in many countries, gives this region the second lowest worldwide coverage of water and sanitation (WHO / Unicef, 2004).

Whilst many agencies identify the challenge as providing increased resources and financial support (Terry and Calaguas, 2003), it is the contention of this research that the real challenge lies not only in providing the budget for adequate water and sanitation facilities, but in energising communities to participate in this challenge and to ensure, through health promotion, that there is a demand for improved facilities, particularly for sanitation. The need to find a model that induces positive behaviour change is critical if the Millennium Development Goals are to impact at all on the health of those targeted for improvement. This requires an urgent identification of health promotion strategies that are cost-effective and can be reliably predicted to decrease risk practices.

1.4. Lack of behaviour change

A considerable body of literature has established the connection between improved hygiene in the home and the reduction of infectious diseases (Feachem, 1984) but there have been few rigorous studies on the cost-effectiveness of hygiene and health promotion (Loevinsohn, 1990). The difficulty with improving hygiene in the domestic domain is that it also requires considerable change of habitual behaviour by the target population, who have to actively devote their own energies to the intervention if hygiene standards are to improve (Cairncross et al., 1996). The lack of engagement by communities and consequent lack of behaviour change in the home, has been the major constraint in the past towards achieving potential health outcomes from water and sanitation programmes (Feachem, 1978).

1.5. The Determinents of Health

This thesis focuses on the three principles of the Ottawa Charter (WHO, 1986): creating supportive environments; strengthening community action; developing personal skills, which aim not merely to reduce disease, but to address the determinants of health.

The Community Health Club Approach described in this thesis provides a 'vehicle for change' that is capable of modifying the determinants of health to ensure long-term hygiene improvement, based on community cohesion and mutual support groups.

The approach was developed over a decade ago and field-tested in Zimbabwe in 1995. It was scaled up in five districts in Zimbabwe between 1999 and 2001, and subsequently replicated in Sierra Leone in 2002 and Uganda in 2004. Much anecdotal evidence in all three countries suggests strong community response and empirical proxy indications of behaviour change at community level. However more rigorous and systematic research was needed and this was carried out between 2000 and 2004 in Zimbabwe. The cost-effectiveness and impact of the intervention is herein presented.

1.6. What are Community Health Clubs?

'Community Health Clubs' are voluntary, community-based organisations (CBOs) formed to provide a forum for information and good practice relating to improving family health. They aim to create a 'common unity' of understanding and shared perceptions of disease, within an area. Cultural values within many indigenous societies in Africa predispose individuals to seek group cohesion (Gelfand, 1984; Mutswairo, 1996; Ncubane, 1977). With a calculated use of group dynamics, the Community Health Club approach was crafted by the author specifically to achieve behaviour change. Social pressure and group conformity are, in this model, seen as more potent change agents than is the mere appeal to individual rationale through cognitive learning, although the later is also recognised as being important. By adjusting norms and values this health promotion strategy creates a 'culture of health,' which enables women to successfully control most preventable diseases and manage their family's health. By constant reinforcement of key messages, bolstered by group consensus, Community Health Clubs can develop self-efficacy enabling members to successfully challenge existing cultural practices that undermine good health. Social support encourages them to move from what is perceived in this thesis as a 'cyclical worldview' tied to traditional cultural norms, towards a more 'linear worldview', where change is endorsed. If the critical mass in a community change their core values and beliefs based on informed decisions, late adopters are likely to conform for social reasons. Thus positive behaviour change in hygiene is reasonably predictable if a person is an active member in a dynamic Community Health Club.

1.7. The Trend in Health Promotion

Early attempts at health promotion were only marginally successful. Despite the wealth of theoretical constructs, there is still a dearth of rigorous studies that have

operationalised health promotion models and successfully demonstrated hygiene behaviour change in the field (Cave and Curtis, 1999). A benchmark is essential if ideas are to break new ground in the sector, but to-date few peer reviewed studies can be found to meet these standards of academic rigour as itemised by Loevinsohn, (1990).

Loevinsohn (1990) analysed studies produced during the 1970s and 1980s and suggested that a *few simple* messages targeting *one* disease was the most effective means of ensuring behaviour change. His tentative recommendations appear to have been followed by practitioners in the field, to the point that what was merely a suggestion came to be accepted as the prevailing wisdom during the 1990s. This is evidenced by trends in research studies; fourteen out the fifteen rigorous studies selected in the three reviews which have monitored studies over the past twenty five years (Loevinsohn, 1990, Cave and Curtis 1999, Ahern 2000), were found to focus on a single condition, and promote fewer than four key messages (See Section 2.5).

It is the contention of this thesis that this type of reductionism is not cost-effective and that more sustainable benefit in the long term is to be gained for communities from a broader approach in which all aspects of preventative disease are addressed rather than narrowly targeting one disease. The Community Health Club intervention, sought to tackle all the infectious diseases that could be prevented by good home hygiene. Over twenty health sessions recommended an entire raft of behaviour changes that could control diarrhea, dysentery, cholera, scabies, ringworm, trachoma, and roundworm, as well as malaria, shistosomiasis, and HIV/AIDS, tuberculosis and acute respiratory infections.

1.8. Demand Led sanitation

Whilst there are many small changes that can be made relatively easily in the kitchen and the yard to improve hygiene, the most difficult to achieve in terms of time, effort and financial investment is the construction of a household latrine. Demand led sanitation is one of the most challenging of outcomes in a health promotion campaign and can be taken as one of the strongest indicators of community commitment, as it involves considerable outlay in local resources.

Current approaches to encouraging communities to construct latrines have failed and a radical change of approach is needed (Cairncross, 2003a). The Community Health Club (CHC) Model was designed to demonstrate that with a sufficiently strong sanitation campaign, the community can be persuaded to build latrines using their own resources. The debate continues as to which development model provides the most effective results in changing peoples behaviour (Esrey et al., 1991; Nutbeam and

Harris, 1999a, 1999b) and Health Promotion, as a relatively new discipline, is still searching for credible paradigm (Bunton and MacDonald, 2004). This research hopes to contribute to this dynamic.

The Community Health Club intervention aimed specifically to:

a) achieve high levels of behaviour change;
b) to find a means to quantify the changes that take place;
c) to find a model that could be sustainable and replicable;
d) to provide a means of predicting behaviour change.

1.9. Objectives of the study

This study was undertaken in 2000, after five years of Community Health Club activity in Zimbabwe, in order to verify anecdotal evidence which cited numerous examples of high levels of community uptake. More rigorous research was needed to ascertain the following:

- ***Has there been any positive behaviour change as a result of the Community Health Club intervention?***
- ***If there has been behaviour change, how has it been achieved?***

The following hypotheses are tested in this study:

- Community Health Clubs will increase members' health knowledge.
- Community Health Clubs should induce positive behaviour change.
- Using Community Health Clubs is a cost-effective method of hygiene promotion.
- Community Health Clubs attract a strong and sustained adherence.
- Community Health Clubs meet the identified needs of rural women.

The following chapters will attempt to answer these questions by two means:

Firstly, by the analysis of *quantitative* data, taken from a household survey of 50 Community Health Clubs in two districts of Zimbabwe. Levels of health knowledge of 729 respondents were assessed, as well as spot observations of 21 key indicators in each household. These were then compared to a control group in two neighbouring areas who were not members of Community Health Clubs.

Secondly, *qualitative* research provides an analysis of twenty structured interviews with Community Health Club members, as well as ten pair-wise ranking exercises using community based evaluation to help understand the social-psychology of this research in terms of human motivation.

1.10. Summary of Chapters

Chapter 2 provides a typology of health promotion theories (Nutbeam,1999a) and discusses the issues of horizontal versus vertical interventions. Three reviews (Loevinsohn, 1990; Cave & Curtis 1999; Ahern 2000) are used to assess the achievements of the most rigorous studies, and thoroughness of these health promotion interventions are compared.

Chapter 3 considers psychodynamic theories of Human Motivation in particular some which examine universal behavioural tendencies, basic needs and incentives: the Hierarchy of Needs (Maslow, 1954) and the Need to Achieve (McClelland, 1961). Attention is also paid to the emerging importance of Social Capital (Kawachi & Berman, 2000) which is seen as particularly relevant for this research.

Chapter 4 situates the intervention within the context in Zimbabwe presenting some of the key aspects of Shona and Ndebele culture (Gelfand, 1979,1984) related to gender issues which may affect adherence to the Community Health Clubs. Determinants of health are discussed to enable an assessment of the current intervention related to other counties. The final section provides an overview of the most common causes for hospital admission in Zimbabwe, with special reference to HIV/AIDS.

Chapter 5 outlines the theoretical basis from which the Community Health Club Model has been developed. The Cyclical-Linear Model describes the process of changing social norms through social interaction showing how behaviour change in Community Health Clubs (CHC) may take place.

Chapter 6 describes the implementation of the CHC Model from earliest field trails in 1995 to a fully-fledged programme in 2001, and provides detailed reports on the training methodology, the costs and the health and social outcomes in Makoni and Tsholotsho Districts.

Chapter 7 presents the design of this research and interrogates the research methodologies which include qualitative and quantitative approaches. The sampling procedure is examined, and possible sources of bias and objectivity discussed.

Chapter 8 presents the quantitative results of the household surveys conducted in Tsholotsho and Makoni Districts in 2000, giving levels of health knowledge and behaviour change in Community Health Club members compared to a control group, substantiating the cost-effectiveness of the intervention.

Chapter 9 provides qualitative insights into the perceptions of Community Health Club members from twenty interviews conducted in Makoni District in 2004 to ascertain reasons for continued adherence to Health Clubs.

Chapter 10 discusses how the study has attempted to meet standards of scientific rigour required in order to validate findings. It revisits the principle of addressing the determinants of health, and shows how the Community Health Club Model has the ability to predict and measure behaviour change which can provide a cost-effective alternative to more vertical interventions.

Chapter 11 looks towards the future replication and scaling up of the Community Health Club Model and pinpoints areas of applied research which would provide deeper understanding of this approach.

CHAPTER 2. HEALTH PROMOTION

> *The more powerful forms of health promotion action are those which are long term, and least easily predicted, controlled and measured by conventional means. Against this, important and valued advances in knowledge and credibility, has come from more tightly controlled interventions which have been evaluated through the application of more traditional experimental designs. This tension between 'scientific rigour' and the perceived advantages in long term effectiveness and maintenance coming from less well defined content and methods of community controlled programmes continues to pose technical problems in evaluation.*
> (Nutbeam, 1998a)

SUMMARY

This Chapter is a review of the literature on health promotion considered relevant to the intervention discussed in this thesis.

Section 2.1. defines the meaning of theory and how it can be useful to practitioners.

Section 2.2. presents a typology of theories as identified by Nutbeam (1999a) and classifies themselves according to those that focus on change in individual and those that focus on change in society. The same theories are a reclassification based on two distinct paradigms in terms of development theory: Cognitive-rational and Psycho-dynamic approaches to understanding the mechanism of change.

Section 2.3. highlights how theories can be understood in terms of a vertical or a horizontal approach when operationalizing interventions, and how this affects the sustainability of interventions and their usefulness to the community.

Section 2.4. examines a method for evaluating Health Promotion through the Outcome Model (Nutbeam, 1999a) based on the determinants of health of the Ottawa Charter (WHO, 1986).

Section 2.5. is a detailed analysis of fifteen studies that have been identified by three reviews as rigorous according to specific criteria (Loevinsohn, 1990; Cave and Curtis, 1999; Ahern, 2000).

Section 2.6. revisits the achievements of the rigorous studies in terms of type of intervention, social and health outcomes, disease reduction and levels of behaviour change, cost-effectiveness and levels of education.

Section 2.7. analyses the thoroughness of each intervention in terms of number of direct interactions with the community, complexity of training and number of observations taken to indicate behaviour change or disease reduction.

Section 2.8. looks at two horizontal studies which, to the author, represent sustainable development and a study where community Health Clubs have been used in Zimbabwe where outputs are comparable to those achieved in this intervention.

Section 2.9. discusses pertinent issues arising from the literature review, which will be revisited at the end of this research in more detail, once the result of this intervention have been presented.

2.1. THE NEED FOR THEORY

One of the main criteria for a rigorous study (Loevinsohn 1990) is that an intervention should be based on a theory, and or some model of development. To be of use to other practitioners a theory should be able to explain why some programmes galvanise people into action and predict the conditions under which such activity occurs. It should also demonstrate the relationship between knowledge, belief, social norms and behaviour (Nutbeam, 1999a).

A theory may be defined as follows:

> *Systematically organised knowledge applicable in a relatively wide variety of circumstances devised to analyse, predict, or otherwise explain the nature or behaviour of a specified set of phenomena that could be used as the basis for action* (Van Ryn and Heany, 1992).

The following section outlines a range of health promotion theories that have been developed in the past thirty years (Nutbeam, 1999a), and categorises them firstly according to whether they focus on individual change or change within the society at large, according to Nutbeam (1999a). Secondly they are re-categorised according to whether the theory has an understanding of change through a cognitive-rational or a psycho-dynamic means. Further, there is an analysis on the author's perception of

which theories lend themselves to a vertical or a horizontal intervention when applied in the field to a community.

2.2. HEALTH PROMOTION THEORIES

2.2.1. Change Through Individual vs Society

2.2.1.1. Theories that focus on individual change

Theories that cover individual behaviour and seek to induce behaviour change through focusing on individuals include the Health Belief Model (Stretcher & Roenstock, 1997; Janz & Becker, 1984; Harrison et al., 1992), the Theory of Reasoned Action and Planned Behaviour (Ajzen & Fishbein, 1980 ; Ajzen 1991, Montano et al., 1997), the Stages of Change Model (Prochasca and di Clemente, 1984, 1997) and the Social Cognitive Model (Bandura,1986, 1995).

2.2.1.2. Theories that focus on change within society

Alternatively there are a group of theories that explain change with reference to the community and the most well know of this group is the Diffusion of Innovation (Rogers, 1983). Theories of Rural Development (Chambers, 1986) or the approaches of Community Development, the Social Planning and the Social Action (Bush et al., 2002; Minkler and Wallerstein, 1997; and Rothman and Tropman 1987, 2001) are all variations on methods of empowering communities and achieving their involvement and cooperation.

A cohesive society is marked by *'an abundance of "mutual moral support", which instead of throwing the individual on his own resources, leads him to share in the collective energy and supports his own when exhausted'* (Kawachi, 1987). This form of mutual support and trustworthiness is conceptualised by some as Social Capital, and has been defined as *'those features of social structures – such as levels of interpersonal trust and norms of reciprocity and mutual aid – which act as resources for individuals and facilitate collective action* (Coleman 1990; Putnam, 1993a). In the context of Public Health Programmes, Social Capital can help communities to manage their own health; it has, for instance, been shown to reduce conditions such as heart disease (Kawachi & Berman, 2000).

There are a group of Health Promotion practitioners who advance strategies using media communication for change within society (Kotler and Roberto, 1989; Andreasen, 1995; Ling et al., 1992; Miabach et al., 2002). The Social Marketing

Approach, through public/private partnerships is the latest trend in health promotion in developing countries as it is seen as a cost-effective strategy to induce behaviour change (Borghi et al., 2001). It seeks to use the same social dynamic as commercial advertising through the media and appeal to status. The disadvantage of the Social Marketing Approach is that when key messages are broadcast through the radio and television, it is difficult to evaluate results accurately because there are seldom defined and 'captive' target population (Elder et al., 1998). In addition any measurement of the impact may be easily confounded by other effects beyond the control of the intervention, given the open-ended nature of the strategy.

2.2.2. Cognitive-Rationale versus Psycho-social patterns of behaviour change

The theories discussed above can be reclassified into those which use a cognitive-rationale approach to problem solving through information linked to action, and those which use a psycho-social approach to action, seeking to modify norms and values through social pressure.

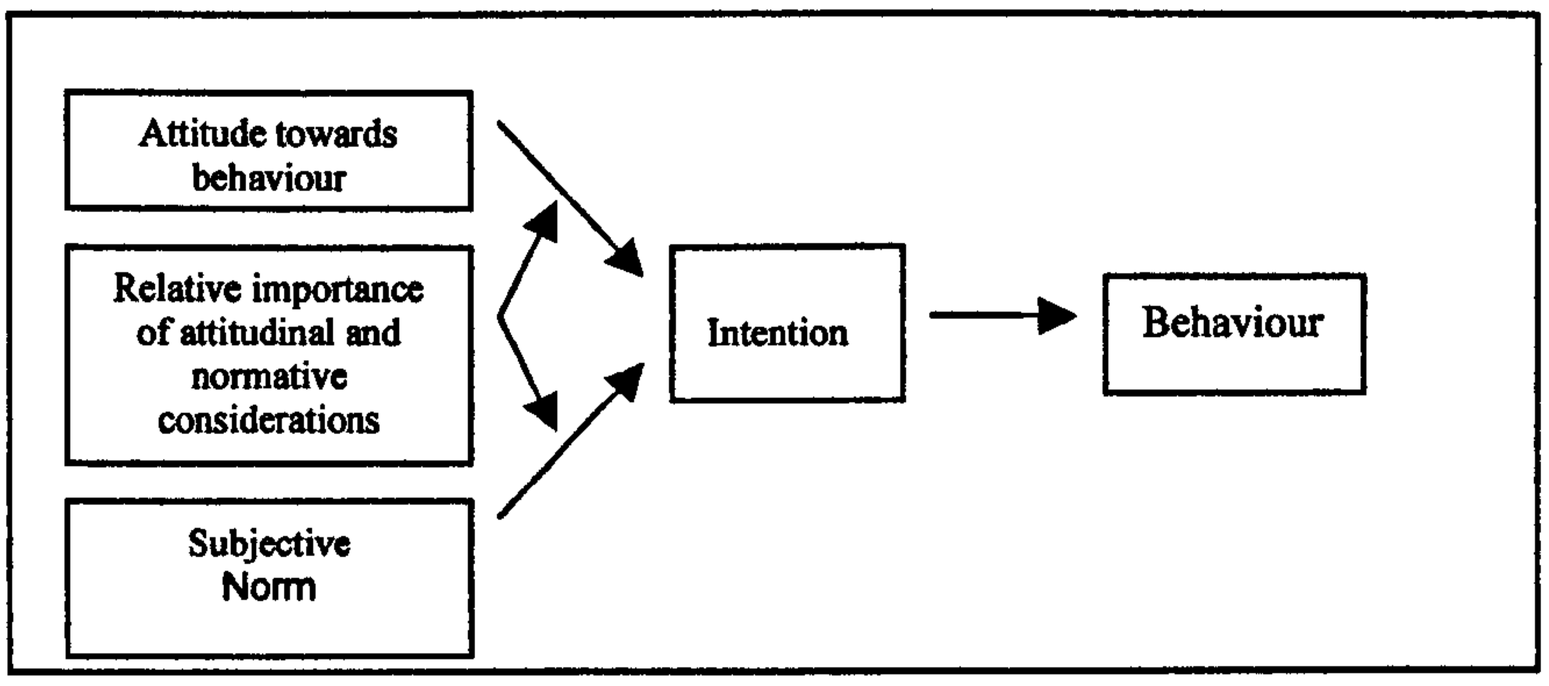
2.2.2.1. Cognitive-Rationale perspective

The Social Planning Approach is of greatest importance in this discussion as most of the rigorous studies discussed use this approach either directly or subliminally. Social Planning is merely a term for interventions that reflect a professional, epidemiological analysis of health problems, in which interventions tend to be expert-driven, task-orientated and based on a rational-empirical approach to problem solving. With a similar cognitive perspective is the Health Belief Model (Cognitive Learning) which accounts for the variance of an individual's behaviour based on their attitudes and belief. Thus by *changing beliefs*, actions will be affected, and whilst this may be a rational response, this is seldom enough to affect behaviour change. Both approaches focus on the rational explanation and solution to the condition: the Social Planning on disease identification and cure or prevention, and the Health Belief Model on a rational connection between knowledge and behaviour change. Both these theories will tend to produce vertical interventions (See Section 2.3.1.) when they are operationalised, by virtue of their narrow focus on knowledge or disease, in isolation from social dynamics.

2.2.2.2. Psycho-Social perspective

Psycho-social analysis of human behaviour change recognises other factors that influence change rather than purely cognitive-rational aspects. The Theory of Reasoned Action and Planned Behaviour emphasises the importance of *social pressure* to effect individual change. Behaviour is determined by a combination of *personal belief, subjective norms and perceived personal control* (self-efficacy). A person's belief that a behaviour leads to certain outcomes and his/her evaluation of these outcomes will determine his intention. In addition, a person's belief's that specific individuals or groups support a certain behaviour (the subjective norm) will also affect his/her motivation to comply with the specific referents. After assigning different weights to these two components, they can be used to predict the person's intention to attain the outcomes in question. This however seems to assume that once the intention is strong, the behaviour will follow, although this might not necessarily be the case in reality (See Fig.1 below).

Fig 1: *Theory of planned behaviour: factors determining a person's behaviour*
(Ajzen and Fishbein, 1980, p.8)



The Social Learning Theory (Bandura 1986, 1995) investigates how the behaviour of individuals interacts in a dynamic two-way process with their environment in constantly changing dynamics termed *'reciprocal determinism'*. Three important contributory factors in effecting change are *observational learning* (emulating others), *expectations* associated with behaviour change, and the perceived personal capacity to effect change (*self-efficacy*). The health worker thus functions as a facilitating agent for change, helping to modify the social environment to make it more conducive to change, as well as building the *self-efficacy* of the individual. Self-efficacy can be enhanced by breaking down the complexities of the target behaviour into manageable components, focusing on short term gains (Remington & MacDonald 1985), and tackling simple behaviours before the more complex ones. It enables people to have the confidence to

achieve their tasks (Bandura, 1986). By building individual self-efficacy the health promoter functions both as a facilitator and helps to modify the social environment to make it more enabling.

The Theory of Reasoned Action and Planned Behaviour and the Social Learning Theory provide the basis for a more community-based intervention which will necessarily produce a more horizontal or holistic approach to community development rather than the narrow focus on reduction of disease.

Theory underpins an intervention and will determine whether the theory will be translated into a vertical or horizontal intervention in the field (See Table.1 below).

2.3. TYPOLOGY OF VERTICAL VS HORIZONTAL INTERVENTIONS

It is also useful for this research to categorise the interventions that have been selected into two main perspectives, that of a vertical and horizontal perspective. As mentioned above this will determine the sustainability of the intervention and its cost-effectiveness, as will be discussed further in this Chapter (See Section 2.6.4).

2.3.1. Vertical Interventions

'Vertical' interventions are those that tend to narrow the research objective to one particular condition or disease (See Table 1). They often may achieve immediate change in health status, but they do not aim to build capacity or to sustain the behaviour in the beneficiaries. As discussed above this often represents the Social Planning approach to problem solving, focusing on cause and effect. To control the disease, specific behaviours are targeted, such as ensuring hand washing with soap or breastfeeding babies. Because the target is so specific, the intervention can be fairly accurately measured; success is usually gauged by outcomes that can be quantified and are statistically significant and verifiable. This tends to reduce the intervention to a very structured and focused campaign, but the term 'vertical' is used rather than 'reductionist', as this is a negative label, whereas there are often positive aspects to this perspective. For example vertical intervention may be entirely appropriate in an immunisation campaign, or in emergency programme where shortage of time dictates a rapid response. However, diarrhoea, is transmitted by the faecal-oral route and may be water-borne, food borne or by direct transmission (Feachem, 1984), which means that to interrupt this transmission multiple interventions are needed as it cannot be effectively controlled by only one means, for example providing clean water. To combat diarrhoea effectively food hygiene has to be improved as well as personal hygiene to prevent

contamination of food by the hands. This requires a more holistic approach, which can target a broad range of risk practices. Whilst some interventions (like hand washing with soap) may make significant improvement (Curtis and Cairncross, 2003) it is preferable to address all the risk practices if it can be done as cost-effectively.

2.3.2. Horizontal Interventions

'Horizontal' health promotion interventions, tend to look at the disease or condition within the social context. Even if it seeks to address a particular disease, the problem is seen essentially as either social or structural, or a combination of both. The assumption here is that by modifying the determinant, the condition or disease will be overcome in the long term and thus lead to sustainable improvement. Thus the solution is perceived as only possible if the determinants, social organisation and/or structural equity, are addressed. Although the disease/condition and the intervention may have been identified and designed by experts, a partnership is formed with the target population to address a particular disease in the long term, and to enable them to change their own behaviour and, as far as possible, use their own resources to do so.

Table 1. *Attributes of 'Vertical' and 'Horizontal' Interventions*

Vertical Interventions	Horizontal Interventions
• Health problem	• Social problem
• Expert driven	• Demand led
• Rational action	• Local priorities
• As soon as possible	• As long as it takes
• Narrow & focused	• Broad & holistic
• Cost effective	• Build capacity
• Measurable outcomes	• Sustainable
	• Participatory

This type of programme aims to be demand-driven and uses participatory activities to build the capacity of the community. The time frame ideally is open-ended and local priorities are allowed to dictate the direction taken, although in practice this is usually limited by broad programme objectives. To build capacity most horizontal interventions tend to employ a participatory style of training, whereas vertical interventions often find this too cumbersome and time consuming.

> *The experience of PRA (Participatory Rural Appraisal) over the past few decades, shows that the more bottom-up and participatory the intervention, the more behaviour changes are likely to be achieved. In addition the intervention is more likely to be perceived as owned by the target population rather having been than foisted upon them (Cornwall, 1997).*

2.4. THE OUTCOME MODEL FOR HEALTH PROMOTION

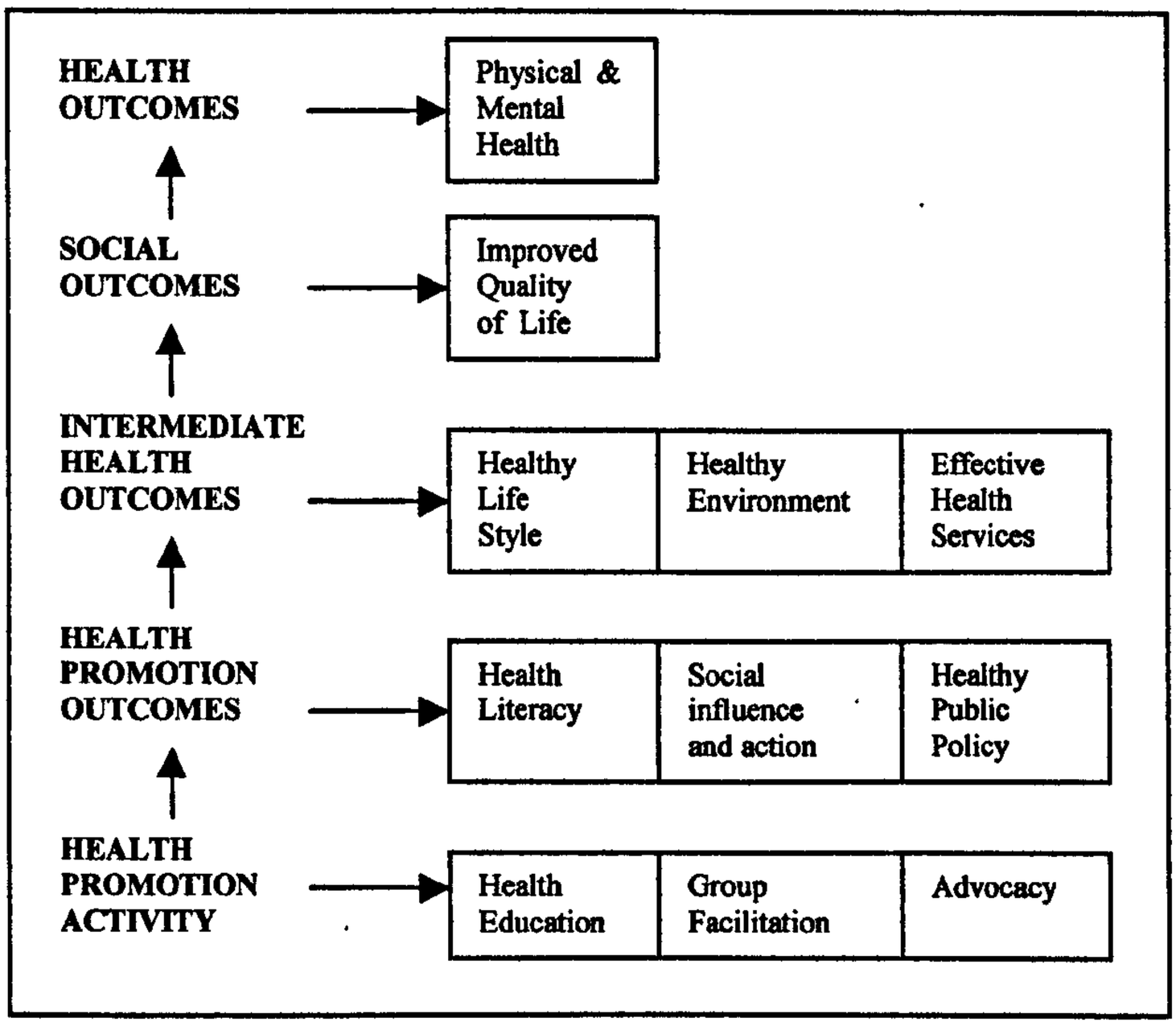
In an attempt to clarify the complexity of evaluating programmes aimed at improving health, Nutbeam (1998b) provided an Outcome Model for evaluating Health Promotion which enables the identification of indicators of success across a range of contributory factors.

Fig.2. below, shows that Health Promotion Activity is comprised of Health Education, Group Facilitation and Advocacy. The three measurable outcomes will be social influence and action and improved Public Health Policy. The Health Promotion Outcomes will lead to Intermediate Outcomes, consisting of healthy lifestyle and environment and effective health service. This in turn leads to Social Outcomes (an improved quality of life), and this finally will provide a Health Outcome: good health.

As Nutbeam (1999) asserts:

> *Health promotion is described as a 'process' indicating that it is a means to an end, and not an outcome in its own right. Health promotion is an activity directed towards enabling people to take action. Thus health promotion is not something that is done on, or to people; it is done with people, either with individuals or withgroups. Participation and partnership are valued processes in health promotion (Nutbeam, 1999b).*

Fig. 2. Outcome Model for Health Promotion (Nutbeam, 1999; adapted by the author)



2.5. ACHIEVING SCIENTIFIC RIGOUR

In three reviews of health promotion studies (Loevinsohn, 1990; Cave and Curtis, 1999; Ahern, 2000) in the past 15 years, in which a total of 334 studies were considered for review, only fifteen were found to be rigorous. All the studies which passed the criteria for selection were without exception, studies that targeted only one disease or condition. In addition in practically all cases the studies only promote a limited number of key health messages, and evaluated their success based on only one or two indicators. Many academics will only accept that a health promotion intervention is indeed effective in terms of reliability and replicability if the study can demonstrate methodological rigour (Ahern, 2000). Loevinsohn (1990) sharpened this debate by identifying criteria for evaluating the rigour of health promotion interventions in developing countries, and in recent years his list of eleven criteria has become the benchmark of reliability (See Table.2. below). Loevinsohn's four main criteria are: a description of the educational manoeuvre sufficiently detailed to allow replication by other health workers; a description of the target audience that would allow others to judge whether the population they deal with resembles the population studied; a simple controlled study design with a sample size of more than 60 individuals or more than

two 'clusters' (villages or other units); the outcome of interest must either be a change in observable health related behaviour or in health status.

Table 2. *Loevinsohn's (1990) Characteristics of a Rigorous Study*

CHARACTERISTICS OF A RIGOROUS STUDY (Loevinsohn, 1990)

1. A study based on explicit theory
2. Adequate description of how the strategy was adapted to local conditions
3. Example given of materials or educational process employed
4. Adequate description of resources required to carry out educational process
5. Measured outcome before and after the intervention
6. Period between education and outcome more than one year
7. Evidence of community participation in design, goals or outcome measures
8. Article claimed to show positive results for intervention evaluated
9. Included discussions of possible bias or caveats
10. Included p-values or confidence intervals
11. Employed some form of modelling such as regression

Of sixty seven articles published between 1966 and 1987 (See Table 2), only three met the four main methodological attributes (Seyegh & Mosley, 1976; Stanton & Clemens, 1987; Ross et al., 1983), (See Table 3 below). Of the total potential articles only 47% provided enough description of the intervention to be replicated, 40% mentioned the literacy levels of the population, and, importantly, only 21% were controlled studies with a sample size of greater than 60 individuals or two main clusters. In terms of evaluating outcome, 33% measured success by change in health status whilst another 33% used observable changes in health behaviour as proxy indicator for reduction in disease.

On the basis of finding so few rigorous studies, Loevinsohn (1990) concluded:

> *Given the paucity of methodologically sound studies it is difficult to reach any firm conclusions about the effectiveness of health education. From the few well-conducted studies it appears that health education can sometimes lead to changes in behaviour and in health status although there remains room for legitimate scepticism. It is also difficult to conclude from the available data whether any particular strategy is*

superior to any other. From the three articles that included methodologically rigorous evaluations it would appear that concentrating on a few messages, repeated frequently and in a number of different forums increased the likelihood of success (Loevinsohn, 1990).

Table.3.

Summary of achievements of 15 rigorous case studies (1975-2000) showing improved practices or reduction of disease (Loevinsohn, 1990; Cave and Curtis, 1997; Ahern, 2000).

Author	Year	Country	Focus	Type of Intervention	% improvement of practises	Reported Disease Reduction
Lovinsohn Review	**1990**			**Review**		
Sayegh & Mosley	1976	Lebanon	Contraception	Social planning	15%	N/a
Ross & Loening	1983	South Africa	Breastfeeding	Social planning		Not applicable
Stanton & Clemens	1987	Bangla-desh	Diarrhoea	Social planning	49% of 1	1 x 26%
Cave & Curtis	**1999**	**Review**		**Review**		
Haggerty et al.	1994	Zaire	Diarrhoea	Social planning		11%
Lloyd et al.	1994	Mexico	Dengue	Social planning	Decrease p=0.01	Not stated
Pant et al.	1996	Nepal	Malnutrition	Social planning		RR = 0.25 & 0.59
Tayeh & Cairncross	1996	Ghana	Dracun-culiasis	Social planning	56%	20%
Elder et al.	1998	California	Heart disease	Social Marketing		Not specific
Ahern	**1999**			**Review**		
Allen et al.	1992	Rwanda	HIV/AIDS gonorrhea	Social planning	15% increase in condom 10% increase in use of spermicide	Gonorrhea 13% to 3% in 24mths
Valente et al.	1994	Gambia	Family Planning	Social Marketing	Modern methods 19% to 30%	Not applicable
Alpasca et al.	1995	Philipines	HIV/AIDS	Cognitive Learning	Not found	Not applicable
Pinfold et al.	1996	Thailand	Diarrhoea	Social Marketing	Finger contamination: Pre-intervention 4.1 to 2.7	Not measured
Morrow et al.	1999	Mexico	Breast feeding	Social planning	Exclusive breast feeding	Reduction of infant diarrhoea : RR=2.2
Fawole et al.	1999	Nigeria	HIV/AIDS	Cognitive Learning		
Klepp et al.	1997	Tanzania	HIV/ADS	Social planning	Intervention: control Not significant	Not applicable

Loevinsohn is the first to point out that it is questionable whether generalisations regarding the success of hygiene behaviour change can be made on the limited existing evidence. However it would appear that his recommendations to focus on a 'few messages' have been more rigorously followed by subsequent researchers, than his strong appeal for more rigorous research (Cave and Curtis, 1999 and Ahern, 2000). Loevinsohn's limited evidence from three articles (1990) led him to suppose that the health promotion was most effective when focused narrowly on one disease and when it only aims to change a few behaviours, with a few simple messages often repeated. Following this lead, the conventional wisdom on health promotion appears to have shifted to endorse this approach.

Cave & Curtis (1999) who identified 242 articles of interest from grey literature and peer-reviewed journals written between 1987 and 1999, found that none of these studies qualified using Loevinsohn's original criteria (See Table 2). This review decided to accept studies that had more than 60% of Loevinsohn's original eleven criteria, but this seriously affects the validity of some claims (See Elder et al., 1998; Section 1.7.2.).

Five studies (See Table 3) were identified (Elder et al.,1998; Haggerty et al.,1994; Lloyd et al., 1996; Pant et al., 1996; Tayeh & Cairncross, 1996). The eleven other studies that *'showed sufficient rigour to evaluate impact'*, were rejected due to lack of evidence of behaviour change (Cave and Curtis, 1999).

Ahern (2000) used the same Loevinsohn 'blueprint', but divided the attributes into those that were *essential* and those that were *desirable.* Ahern's typology (See Table 4 below), shows the percentage of studies succeeding in these attributes.

After assessing a further 25 studies, Ahern (2000) found only an additional *seven* papers that were of sufficient methodological rigour to demonstrate behaviour change or improved health (Allen et al.,1992; Alpasca et al., 1995; Fawole et al.,1999; Morrow et al., 1999; Pinfold and Horan, 1996; Valente et al., 1994).

Table 4. *Essential and Desirable Attributes in Health Promotion Studies (Ahern, 2000)*

Essential Attributes		
1.	Description of target audience including level of education	32%
2.	A controlled study with 60 individuals or two clusters	47%
3.	Adequate description of the promotion techniques resources and processes to enable replication	96%
4.	Outcome variable measured with p values and/or CI as well as measured before and after intervention	68%
5.	Confounding, bias and caveats addressed	60%
Desirable Attributes		
1.	Socio-demographic characteristics of intervention and control group measured and comparable	72%
2.	Details of cost of the intervention	4%
3.	Details of distance between groups and how cross-contamination was avoided	35% 33%
4.	Details of project sustainability	20%
5.	A study based on explicit theory	12%
6.	Time-table for baseline survey, intervention and follow-up survey and evaluation	88%

These concerns not withstanding, the three reviews identify a total of only fifteen interventions, and these now are taken to represent the most methodologically sound health promotion studies that have been published in the past 30 years (See Table 3 above). However whilst the criteria may provide a selection of rigorous research useful for the literature, the question should be raised whether these studies have also achieved sustainable development in the community.

2.6. ACHIEVEMENTS OF RIGOROUS STUDIES

It is significant to this thesis that all fifteen of the studies selected have only focused on a single issue:

- Contraception (Seyegh & Mosley, 1976)
- Breastfeeding (Ross & Loening, 1983; Morrow et al., 1999);
- Diarrhoea (Stanton & Clemens, 1987; Haggerty et al., 1994; Pinfold et al., 1996);
- Dengue (Lloydet al., 1994);
- Malnutrition (Pant et al., 1996);
- Dracunculiasis (Teyeh & Cairncross, 1996);

- Heart Disease (Elder et al.,1998);
- HIV/AIDS (Allen et al., 1992; Alpasca et al., 1995; Fawole et al., 1999; Klepp et al., 1997)
- Family planning (Valente et al., 1994).

2.6.1. Vertical or Horizontal Intervention

Discussion above has identified the difference between two discreet approaches: a vertical intervention that targets a specific condition without addressing the wider issues of health, and horizontal interventions that address long term determinants of health (Section 2.3 and Table 1). Out of the fifteen studies selected, all except one (Elder et al., 1998) could be classified, as *vertical* interventions. Of this number, ten used the Social Planning Approach; three used Social Marketing; and one used Cognitive Learning similar to the Health Belief Model.

2.6.2. Social Outcomes

Only one (Elder et al., 1998) used the more 'horizontal' approach of Social Learning Theory (See Section 1.9.4), allowing a broader community-led intervention. The objective in this programme, was to institutionalise the intervention so that it became part of the community. Elder et al., (1998) suggest that the project's effectiveness is proven by the fact that two of the four main interventions continued without donor support which is only a 50% success in the objective. This was the most community-owned of the 15 'rigorous studies' but no quantifiable achievements in disease control or behaviour change were mentioned, thus it failed in Loevinsohn's basic criteria, but was included as it did have < 60% of his criteria.

The other fourteen studies followed their research objectives closely and made no pretence at being community-led. Only the project in Nepal, (Pant et al., 1996), having found that educated mothers were more responsive to the health recommendations, was sufficiently flexible to divert some its resources towards improving the literacy of women as well as pursue its own agenda, which was to establish whether health education or capsule distribution was the most cost-effective method of improving Vitamin A deficiency.

None of the studies reported additional training on any other related diseases that could have been coupled with the disease being researched. If this had been done it would have indicated a more holistic approach (horizontal) to health promotion.

2.6.3. Health Outcomes

The outcomes in behaviour or reduction of disease of the 15 rigorous studies (See Table 3) are now compared. Of those studies that reported improvement in behaviour change we find that the most significant were:

- 10% - 15% use of condoms and spermicides, Rwanda (Allen et al., 1992)
- 19% - 30% increase modern contraception, Gambia (Valente et al., 1997)
- 15% uptake of contraception, Lebanon (Seyegh and Mosley, 1976)
- 49% one out of three diarrhoea messages, Bangladesh (Stanton and Clemens, 1987)
- 56% filtering water to prevent dracunculiasis, Ghana (Teyeh and Cairncross, 1996).

Five articles out of 15 reported measurement of disease reduction as follows:

- 10% reduction in gonorrhoea, Rwanda (Allen et al., 1992)
- 11% reduction of diarrhoea, Zaire. (Haggerty et al.,1994)
- 20% reduction in dracunculiasis, Ghana (Tayegh and Cairncross, 1996)
- 26% reduction of diarrhoea, Bangladesh. (Stanton and Clemens, 1987)
- RR=0.2 - 0.59 reduction of malnutrition, Nepal (Pant et al., 1996)
- RR=2.2 reduction of diarrhoea, Mexico (Morrow et al., 1999).

The other studies did not state the rate of disease reduction, or were not specific.

2.6.4. Cost-effectiveness

Given the limited resources available for Health Promotion it is surprising that so few studies give details of the intervention in terms of it cost-effectiveness. Only one study (Pinfold and Horan, 1996) deals with this aspect, measuring the cost-effectiveness of achieving cleaner hands for some mothers in Thailand. This was estimated at US$0.67 to US$1.28 per beneficiary. Ahern (2000) found only 4% of his selected studies mentioned cost-effectiveness. Subsequently a paper by Borghi et al (2002) produced one of the few studies of cost-effectiveness that can be compared with the Community Health Club Intervention.

After a three year programme from 1995 -1998 using Social Marketing, in the second largest town in Burkino Faso with one third of a million inhabitants, the cost per household was US$8. Three quarters of the mothers (a small sample of only 8 households) recalled having some contact with the programme, while half could recite its two main messages. However, there were only three key messages in hygiene promotion drive. Results were significant: hand-washing with soap after

handling children's faeces increased from 13% to 31%, and after using the latrine from 1% to 17%. Two other targeted behaviours increased marginally from 74% to 82% for use of potties for children, and 80% to 84% for safe disposal of children's faeces in a latrine.

This study is important for this thesis in order to compare the cost-effectiveness of the intervention of the two programmes (WSP, 2003). The overall cost of the programme was $292,003 over three years (excluding start up costs) of which 42% was for administration, 30% used for research, whilst only 28% was actually spent on the health promotion intervention in terms of house-to-house visits, hygiene lessons in schools, street theatre and radio broadcasts. Borghi et al (2002) conclude that this study compared favourably with six other comparable studies citing cost-effectiveness (Tucker et al., 1998; Smith et al., 1995; Murray et al., 1998; Naficy et al., 1998; Esrey et al., 1985; and Huffman and Combest, 1990).

2.6.5. Levels of Education or Literacy

It has been shown that the mother's level of education is significantly correlated with the levels of her child's health and welfare (Caldwell, 1979; Sandford et al., 1997; Esrey and Habicht, 1998; Pacey, 1982, Levine et al., 1976). However, low levels of education are often associated with the lowest socio-economic bracket, where water and sanitation and hygiene standards may also be minimal, which may confound the association found between education and diarrhoea (Feachem, 1984). Religious practices may also affect levels of endemic cholera as found in Bangladesh where Hindus had over five times higher incidence than Moslems (McCormack, 1969). It is therefore important to know the literacy levels of a target population when drawing conclusions on the effect of interventions on reduction of preventative diseases. In addition, levels of literacy should also be taken into account when planning a health promotion as this will affect the type of training method used, the number of messages and the complexity of the intervention. It was therefore surprising only two studies out of 15 gave explicit details of education levels of their target population. One in California (Elder et al., 1998) estimated the target population to be 38% semi-literate; while Pant et al. (1996) recorded a 58% literacy rate in Nepal. In two of the studies added by Ahern (2000), the target population were the three senior classes in a school in Mexico (Morrow et al., 1999) and in Tanzania Klepp et al., (1997) were targeting school classes of thirteen year old pupils. This apparent lack of attention to reporting literacy levels in the remaining 11 studies makes it difficult to assess whether the number of messages and complexity of the health promotion was appropriate for the level of education of the target population.

2.7. THOROUGHNESS OF INTERVENTION

Three simple indicators of thoroughness are compared: the number of sessions/activities; the number of key messages for target population; and the number of observations used to verify behaviour change (See Table.5 below). If there is an optimal exposure time to health promotion before behaviour change takes place, it could be reasonably assumed that, in terms of budget spent on the thoroughness of the outputs, an intervention is more cost-effective *qualitatively* if the community has changed *many* practices rather than just one or two practices.

2.7.1. Number of face-to-face interactions

Thoroughness can be assessed by the number of face-to-face interactions that have taken place between the health promotion agency and the target population, whether this be community meetings, home visits or clinic attendance.

Four of the studies did not specify the exact number of interactions (Haggerty, 1994; Lloyd et al., 1994; Pant et al., 1996; Teyeh and Cairncross, 1996), which suggests that this aspect was not considered important. Most of the Social Planning models that used community meetings or home visits show low number of face-to-face interactions:

- two visits in the contraception intervention in Lebanon (Seyegh and Mosley, 1976);
- two sessions for the breast feeding programme in South Africa (Ross & Loening, 1983);
- two video/discussions and examinations for gonorrhoea in Rwanda (Allen et al., 1992).

The most thorough studies were in Bangladesh, where Stanton and Clemens (1987) described an intensive eight week interaction with the community; the Cognitive Learning HIV/AIDS programmes in the two areas of the Philippines (Alpasca et al., 1995); in Nigeria (Fawole et al., 1999) where there was a more intense interaction with school children through regular lessons using multi-media; and in Thailand (Pinfold and Horan, 1996) a number of workshops were run over a three to six month period for a diarrhoea intervention.

Table 5. *Summary of type and thoroughness of rigorous studies and educational level of target population.*

Author	Type of Intervention	Thoroughness of Intervention	Complexity of training	Indicators of change	Level of Education
Indicators of Perspective	**Methodology**	**# Interactions**	**# messages**	**# observations**	
LOVINSOHN	**REVIEW**				
Sayegh & Mosley	Social planning	2 visits	1	1	Not given
Ross & Loening	Social planning	2 sessions	small	none	Not given
Stanton & Clemens	Social planning	8 weeks intensive	Not stated	3	Median = 0
CAVE & CURTIS	**REVIEW**				
Haggerty et al.	Social Planning	Meetings Not specific	4	Not specific	Not given
Lloyd et al.	Social planning	Meetings Home visits	1		Not given
Pant et al.	Social planning	Not specific	3	48 observations	58% literacy
Tayeh & Caimcross	Social Planning	House calls	2		Not given
Eider et al	Soc. Market		Not stated.	Not stated	38% semi-lit
AHERN	**REVIEW**				
Allen et al.	Social Planning	2 videos + examination 1 discussion	1	Testing & Survey of Condom use	Not given
Valente et al.	Social Marketing	39 Radio drama 30 radio spots & training manual	Family planning	Use of modern methods	Not given
Alpasca et al.	Cognitive Learning	School lessons Education programme	Condom use & sex behaviour	Pre & post intervention survey	Not given
Pinfold et al.	Social Marketing	Workshops: multi media	Hand washing	Test of Finger contamination	Not given
Morrow et al.	Social Planning	One week classes 2mths mother groups & home visits for 18 mths	Exclusive breast feeding	baseline interv 3 month 6 month control	80% (6 visit) 62% (3 visit) 24% (control)
Fawole et al.	Cognitive Learning	Education Programme 6 weeks; multi media &demos	Condom use & sex behaviour	Pre and post intervention survey	Senior three classes in sec. school
Klepp et al.	Social Learning Theory	Workshops, role play, Community discussion & IEC booklets etc	Risky sex behaviour	Individual interviews?	13 yr olds 7 community

The Social Marketing programmes in Gambia (Valente et al., 1994) and California (Elder et al., 1998) do indicate how many radio spots or dramas were presented, but cannot accurately assess who was exposed to the programme and for how many times. Data indicating a person's ability to recall a particular radio jingle do not necessarily indicate behaviour change. It would appear the Social Planning intervention to promote breastfeeding (Morrow et al., 1999) was the most thorough on an individual basis as it describes an interaction of one week *intensive* training with mothers, followed by two months of meetings in mothers' groups, with two or more home visits to collect data.

2.7.2. Complexity of Training

By *complexity* of training is meant the number of key hygiene messages promoted in the training. All interventions were only targeting *one disease or condition*, and tended to focus on one or more key messages that could decrease that particular condition. For example: diarrhoea programmes stress disposal of children's faeces and hand washing; family planning and HIV/AIDS programmes aim to increase the use of condoms or spermicides; dracunculiasis programmes encouraged primarily the use of filters for drinking water.

All the studies had *less than four messages* indicating that all the interventions were vertical in their approach to preventative health. Only in the malnutrition programme (Pant et al., 1996) was there more complexity, with 48 observations taken to indicate practises of nutrition. Pinfold et al., (1996) took finger tests to measure levels of faecal contamination of people's hands, and this could indicate a wider spectrum of behaviours as clean hands would depend on good hygiene generally.

2.8. STUDIES WITH HORIZONTAL INTERVENTIONS

Within the three reviews there was only one horizontal intervention perhaps indicating the difficulty of this perspective to produce the same precision as vertical interventions (Nutbeam, 1998a). Therefore, for the sake of comparison with outputs from the intervention in this research, two other studies (which were not selected in any of the three reviews), are now highlighted. These two studies (Torun, 1982; Kroeger et al., 1996) represent interventions that are comparable to the Community Development Model, both achieving significant success, not only in effecting behaviour change, but in community mobilisation and long term sustainability of the intervention.

An intervention that addressed the problem of diarrhoea in Guatemala (Torun, 1982) held a comprehensive training programme with five groups of mothers meeting once a week for nine weeks. Training materials were specifically developed and the participatory 'reflection and action' approach was used. Although the focus was only on diarrhoea, unlike most other studies there were 45 positive and nine negative messages, with twenty seven observations in the survey, as well as three key questions on the prevention, transmission and cure of diarrhoea. Health knowledge increased by 19%, with a 33% change in behaviour observed.

Twelve years later a project in three countries in South America showed impressive results (Kroeger et al., 1996), especially in Ecuador and Columbia where the

methodology used in Guatemala was repeated. The target disease in this case was malaria, and three main messages were conveyed. Using 'interactive learning', based on Paulo Freire's (1957) methods at health fairs, as well as an engaging assortment of specially developed materials, engendered the enthusiasm of the community which was evident from the report. In Ecuador after two years, a 34% increase in health knowledge was reported, whilst in Columbia an impressive 93% increase after only one year suggests a real commitment from the community.

A health promotion programme in Bikita District, Zimbabwe is the only other study identified that reports on health promotion using Community Health Clubs (Mathew and Mukuwe; 1999, Mathew, 2005). This intervention is important for this study, because the methodology was identical to the Community Health Club Model as outlined in Chapter 5. Training of field staff for the intervention had been done by the author, and the same training materials and similar membership cards and were used, and 72 Health Clubs were established throughout Bikita District. After a year of intervention, a KABP (Knowledge, Attitudes, Behaviour and Practice) survey, with an 84 point knowledge checklist / questionnaire and using 17 indicators of home hygiene was undertaken in two Health Club villages and compared with two non Health Club villages. Findings indicated a *'clear trend of increased knowledge in Health Club areas.'* Amongst Health Club members as opposed to non-members, unprompted knowledge of risk behaviour in five topics were <20%, and were <10% in another three topics, and <5% in the remaining two topics. The pattern was similar in a selection of risk practices with seven risks practices identified by respondents without prompting: four risks being identified 15% more frequently by Health Club members, while 'not hand washing after the latrine' was 30%, and 'not having separate cups for drinking' was 35% more frequently stated. Interestingly 'not hand washing before food' showed only 10% difference between Health Clubs and control. Observation of risk behaviour also reflected a consistent trend with the control group having a range of between 5% - 35% more high risk practices in all 16 practices.

2.9. DISCUSSION

> *... while academics seek problems and criticise, practitioners seek opportunities and act. Academics look for what has gone wrong, practitioners for what might go right* (Chambers, 1983).

Loevinsohn's formula *'few messages, repeated frequently and in different forums'* has been taken up in the majority of subsequent interventions, and is now accepted by many as best practice. However, as is demonstrated in Zimbabwe (Tichagwa, 1998) rural communities are becoming more sophisticated and literate as each decade

passes, and what may have held true in the early 1990's, when literacy levels were lower in many areas, no longer applies in many developing countries (See p.71, Table 7). Such simple directives as offered in many of the studies above may even appear patronising to local communities, who have often moved beyond the educational stage that is levelled at them. Hence the need for formative research in the design stage of the programme (Curtis, 2000). As we demonstrate in this study, rural men and women during this intervention have processed with ease an entire raft of messages regarding the prevention of diarrhoea, malaria, worms and skin diseases. Over 50 small behaviour changes were achieved (See p.111. Table 12), falsifying the theory that disseminating a few key messages is the best approach.

As noted by Borghi et al (2002), there is a dearth of literature on the cost-effectiveness of health promotion. Whilst the importance of methodological rigour of research studies is readily accepted, surely one of the most important criteria of an intervention is its achievements in terms of quality and quantity of health promotion resulting in behaviour change. Cost-effectiveness can be measured in more robust terms than purely in providing only the cost of intervention. Value for money requires us to understand the quality of each intervention as shown by the thoroughness of each the health promotion provided and this should be considered as important as the methodological rigour. Health promotion will be more robust if it addresses a whole range of preventable diseases, rather targeting a single disease. It is not unreasonable to assume that it would be a more cost-effective use of resources to target *all* preventative diseases affected by poor hygiene practices simultaneously, rather than isolating a single disease from its context. Therefore, given the guidelines in the Ottawa Charter which emphasize the determinants of health, it is surprising that most rigorous studies confine themselves within particular disease categories. To evaluate effectiveness of a health promotion intervention by measuring disease reduction is not always reliable as it is often subject to many confounding variables. The literature has shown that it is more effective to monitor behaviour change as a proxy indicator for disease reduction (Cairncross, 1990). Feachem (1984) noted that there tends to be mainly theoretical explanations of approaches *likely* to succeed and only found three studies (Torun, 1982; Khan, 1982; Black et al.1981) in which health education had actually been shown to decrease diarrhoea incidence. He found from these three studies that hygiene improvement, especially the promotion of hand washing, had succeeded in reducing diarrhoea by between 14% - 48%. Although none of the three interventions specified costs, Feachem surmised that hygiene education would be more cost-effective than other interventions such as water and sanitation but *that operational research was needed to clarify the most effective and feasible types of hygiene education programme, to detail their costs, and to assess their dependence on pre-existing levels of sanitary facilities* (Feachem, 1985). To

calculate the cost per beneficiary a captive target audience is needed and not many interventions have a discreet section of a population that they can be sure have been exposed to health promotion. Additionally, to provide a cost-effective intervention, administration and research costs need to be low whilst the number of beneficiaries needs to be substantial. Given the limited resources available more interventions are needed that are designed at the outset to measure cost-effectiveness.

> *Public Health Practitioners have to make hard choices about how to make best used of scarce resources. Interventions of high priority should be those that*
>
> *a) address a public health problem that has major consequences and*
>
> *b) have demonstrated effectiveness against the condition in question*
>
> *c) are cost effective in comparison with other uses of the money.*

> *In the case of diarrhoeal disease prevention we have a disease which is amongst the top three killers, an intervention of proven efficacy and now with this paper, an intervention which is cost-effective. Carefully designed programmes to promote safe hygiene can be both effective and cost-effective compared to other interventions targeting disease, although further research is required to strengthen this point* (Borghi et al., 2002).

CHAPTER 3 : Human Motivation

SUMMARY

This Chapter is designed to give background into some of the concepts that will be used to analyse and interpret the qualitative data that has been collected for this research.

Section 3.1. provides a brief spectrum of theories of underdevelopment at the macro level from modernisation to dependency theory outlining some structural and economic aspects.

Section 3.2. shows how human motivation theory is split between the behaviourist and psychodynamic paradigms

Section 3.3. concentrates on psychodynamic theories of human motivation, giving some examples of studies which have opened up this field.

Section 3.4. focuses on the theories of Maslow (1954) and explains in detail the Hierarchy of Needs Model The pair-wise ranking exercises in Chapter 9 will be ranked using these categories of needs. Maslow's concepts of Self Actualisation and frustration tolerance are also discussed in relation to group dynamics in the Health Clubs.

Section 3.5. provides two examples of how the Hierarchy of Needs has been tested in the field in two studies (Aronoff, 1971; Ward and Wilson, 1980)

Section 3.6. outlines three positive motivations for behaviour change in the work of McClelland (1967, 1984) and colleagues, on the Need to Achieve, the Need for Affiliation and the Need for Power. The descriptive data in Chapter 9 will be coded using these concepts.

Section 3.7. discusses Fear of Failure and Fear of Success (McClelland, 1984) as two psychological conditions that can hinder self-efficacy (Bandura, 1997).

Section 3.8. outlines the concept of Social Capital (Kawachi and Berman, 2000) as the qualitative interviews (Chapter 9) will note the levels of trust and social networks developed in Community Health Clubs.

Section 3.9. discusses the Sustainable Livelihoods (DFID, 2000) to indicate how the Community Health Club Model can be positioned within this paradigm.

Section 3.10. revisits the key points of the chapter.

3.1. A SPECTRUM OF THEORIES RELATING TO UNDERDEVELOPMENT

> *Science is an economising enterprise. Its purpose is to explain as much as possible of the bewildering variety of events with as few basic constructs and laws as possible. In this respect the field of human motivation is no different: the goal is to find the fewest motives that will account for the most human behaviour.* (McClelland, 1987)

3.1.1. Modernisation Theories

In the 1950's and 1960's development of the Third World was dominated by Modernisation theories that considered economic growth as a realistic strategy to enable society to progress. This perspective perceived that the 'trickle-down' of benefits from the fast adapters was a natural process of modernisation, and this led to later theories of Diffusion of Innovation (Rogers, 1983; Diamond, 1997). This evolutionist perspective can be traced back to one of the earliest sociologists, Emile Durkeim (1897) and was later applied by a group of functionalist sociologists, (Parsons,1964; Merton,1957; McClelland, 1967) who attributed levels of development to the value systems that underpinned traditional and modern societies. They argued that transition from one economic system to another depended on a prior changes in values, attitudes and norms.

3.1.2. Dependency Theories

By the late 1960s and early 1970's, Functionalism was being challenged by a radical Marxist Theory of Underdevelopment that attributed lack of 'progress' in developing countries to the impact of colonialism and imperialism and emphasized how the power to control resources had been denied to indigenous populations (Webster, 1990). Dependency theorists gave political reasons for the underdevelopment of the Third World, providing a fresh post-colonial interpretation of the structural imbalance of economies (Frank, 1969; Warren, 1980; Apter, 1988) which have largely dominated the development sector in the past thirty years. Franz Boas (1962) exposed the shortcomings of the grandiose schemes of cultural evolution which had been proposed by earlier theorists, and the idea that a culture should be judged by its own standards and values rather than those of the investigator is now common practice (Haviland, 1993). Whilst many theorists focus on socio-political reasons for underdevelopment, environmental factors may also inhibit the diffusion of ideas. An interesting thesis is that human development with innovations spreading along climatic zones following latitudes, rather than from north to south (or visa versa), where it is often blocked by natural barriers such as the Sahara Dessert (Diamond, 1997).

3.1.3. Disempowerment Theories

A significant influence on development thinking has been Paulo Freire (1970), who has influenced theorists from many disciplines who attribute lack of development to the disempowerment of the masses. The idea of 'praxis' (reflection and action upon the world in order to transform it), and the need to development the critical awareness essential in reflexive participation, is now the theoretical basis in the participatory approach (See Section 5.5.1.) in many community programmes (Kroeger et al., 1996, Section 2.8). Frere's concern with empowerment of the masses through the 'people-centred' approach, has had significant influence in the development sector and had by the late 1980's, become more widely appreciated than the 'top down' Social Planning approach. The trends in development which have affected the health promotion sector *per se* (Nutbeam, 1999), have been covered in Chapter 1 (See Section 2.2).

3.1.4. The Macro level : Structural Reasons for Underdevelopment

At the macro level, underdevelopment has been contingent on political factors and economic policies. One of the consequences of the ending of the East-West division in simple terms is that the West (including Japan) and Western dominated multinationals have now become the only source of aid, capital and technology for the Third World states and thus enjoy a leverage unprecedented since decolonisation over the economic strategies in most of Africa and South Asia' (Ravenhill, 1990). Whilst some countries such as Tanzania and Zimbabwe had tried to de-link from world capitalism with home grown African models of state socialism, these attempts were undermined by the end of the Cold War and the dissolution of Soviet Union. Lack of external support for socialist policies diminished the viability of alternative development models to capitalism (McGrew, 1992). Global capitalism, the debt burden of developing countries and lack of economic growth, have forced some countries such as Zimbabwe to accept the imposition of economic structural readjustment policies (See Section 4.4.2), in order to receive Western assistance (Auret, 1990). The new global order dictated by only one superpower is perceived by Neo-Marxists as renewed western aggression against the Third World as opposed to the Communist Bloc (Amin, 1990). Neo-liberals interpret this dominance of Western-led democratisation as the beginning of an encouraging transformation of the global order in a positive direction (Fukuyama, 1989). The decline of the Zimbabwean economy has illustrated Sen's theory as to the effects of dictatorship (1999). The denial of basic freedoms to the population with political control of resources can turn a drought, which in a free society can be contained into a national famine, as recently demonstrated in Zimbabwe. Lipton's theories of Urban Bias (1977), which provide not a 'north-south', but a 'rural-urban'

explanation for underdevelopment, may also give insights into the political control in Zimbabwe where urban elites are controlling resources (UN Habitat, 2005).

3.1.5. Social and Cultural Reasons for Underdevelopment

Whist it is acknowledged that there are structural political and economic reasons for underdevelopment at the macro level, (as mentioned above), theorists in the field of Social-psychology have also provided interesting theories giving reasons for social and cultural underdevelopment. Theories of human motivation examine at the micro level, why some groups or individuals change, whilst others do not. Some theories that have informed this research are mentioned briefly below, whilst those that will be used to analyse the qualitative research (Chapter 9) are given in more detail. (Maslow, 1954; McClelland, 1967).

3.2. OVERVIEW OF THEORIES OF HUMAN MOTIVATION

> *The greatest mystery of the universe and the least conquered force in nature remains the human being, his actions and human experiences* (Kanfer and Schefft, 1988).

Human motivation, the ability to predict the behaviour of a person based on inner drives and incentives, is one of the most elusive quests in scientific research (Freud, 1918; Murray, 1938; Hall & Linzey, 1957; Rogers, 1951, 1966; Cattell,1957; Zajonc and Sales,1966; McClelland, 1984; Bandura, 1986). The mechanism of human functioning is far from being understood and in the last century there were credible attempts to provide theories that account for certain behaviour from many perspectives, stretching across a number of disciplines (Psychology, Sociology, Social Psychology, Social Epidemiology, Anthropology). Across these fields perspectives on the perception of human nature tend to divide into two broad paradigms. This division depends (in the simplest classification) on whether the theorist (Psychodynamic school) believes that humans are self-directed from within with *innate* tendencies (Ach, 1910; Smetana and Adler, 1980) or are conditioned by *external* triggers where all behaviour learnt by experience (Behaviourist school) (Thorndike, 1911; Hull, 1943).

3.3. PSYCHODYNAMIC THEORIES OF HUMAN BEHAVIOUR

In Social Psychology theorists aim to provide a simplification of the complexity of man's individual psychology to account for and predict social behaviour. Psychological theories which focus on the individual, explain particular behaviour in terms of personal

experience and needs, often using the subconscious to account for conscious behaviour (Freud, 1918). Bandura explains the Psychodynamic paradigm as follows:

> *Human behaviour is commonly viewed as motivated from within by various needs, drives, impulses and instincts. In psychodynamic theory, human behaviour is the manifestation of the dynamic interplay of inner forces, most of which operate below the level of consciousness* (Bandura, 1986).

An example of psychodynamic theory is Lewin's formula to predict whether motivation would be successful in producing change. He reasoned in his Model of Motivational Conflicts (1935) that the *intent* (psychological force) was the outcome of *Need* (the desire for some end state) multiplied by the *Valence* (the reward value for the end state, divided by an environmental variable called the *Psychological distance* (the difficulties of performing the task). Conscious goal setting is also shown to affect performance. Mace (1935), in an early experiment showed that those who were given specific targets for each day did better than those who were asked to do their best to improve with no specific standards to achieve. Jenkins (1933) demonstrated that although conscious intent does facilitate learning, this process can happen *without* conscious intent.

In the Attribution Theory, Werner (1979) distinguishes four main dimensions of attribution that people use to explain their world:

- *Locus of causation* which locates the cause as external/internal to the subject
- *Controllability* which assesses if the causes can be controlled by the subject
- *Stability* which judges the cause on a stable-unstable continuum
- *Globality which* estimates how widely spread and all pervasive the cause is.

There is less likelihood of the subject ever attempting to change the situation if the problem cannot be controlled; or if the problem is likely to endure, or, in the worse case if the problem is global (Lewis and Daltroy,1990). The Social Learning Theory (Bandura, 1977, 1986, 1995; Strecher, et al., 1986; Rosenstock, 1990, Baranowski et al., 1997) demonstrates how the behaviour of individuals and their environment constantly interact in a dynamic two way process termed 'reciprocal determinism'. According to Bandura (1986), three important contributory factors in effecting change are:

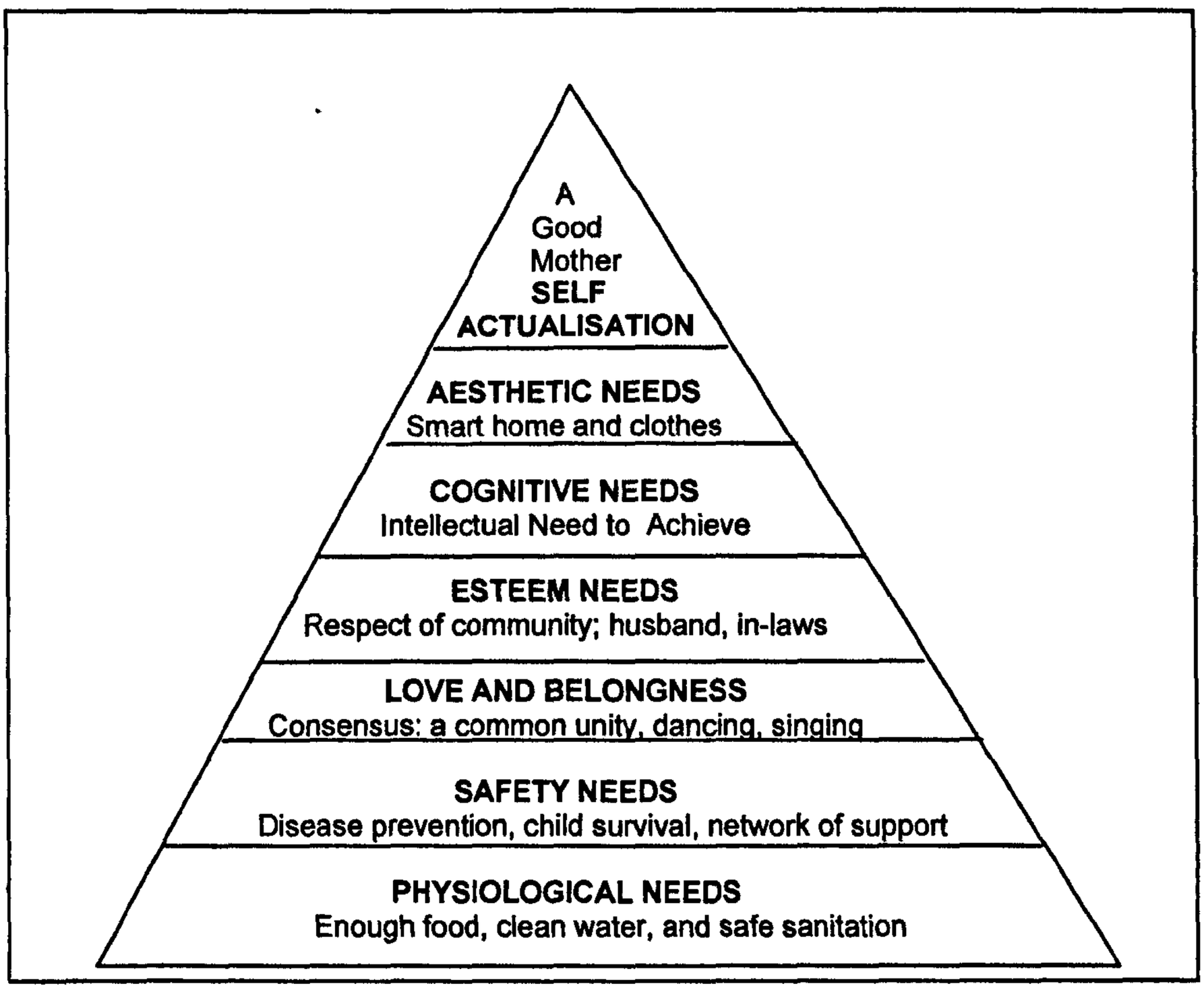
- observational learning (emulating others),
- expectations associated with behaviour change,
- perceived personal capacity to effect change (self-efficacy).

Self-efficacy is one the key concepts which will be used to explain the change taking place in women in particular, within Community Health Clubs, and could be an explanation for personal ability to challenge existing norms and values within the community.

3.4. MASLOW'S HIERARCHY OF NEEDS

Maslow (1954) viewed human nature optimistically, and saw people as constantly striving to improve. He contributed a positive view to the study of human motivation, which was to strongly influence the humanistic psychology movement. His theories bolstered the post-war liberal view that poor people were unable to progress because they were occupied in achieving their most basic needs and therefore had little time for self-improvement.

Fig 3: *The Hierarchy of Needs Theory applied to the appeal of the Community Health Clubs (Maslow, 1954, adapted by author)*



Maslow's Hierarchy of Needs Model (1954) (See Fig. 3 above) continues to be particularly relevant in developing countries because absolute poverty still exists and the basic needs have not been met, unlike in the industrial countries where there is only relative poverty. In addition there are vast gaps between the very rich and the very

poor. The spectrum ranges from emergency situations where starvation is rife and existence is threatened by war and disease, to well ordered within communities and rural communities where the basic needs have been fulfilled and there is time and resources to support activities leading to Self Actualisation. In the context of this research the Model is useful because it can be translated into a local context. Maslow's Hierarchy of Needs can be applied to a subsistence culture in Africa, in this study the Shona and Ndebele people of Zimbabwe.

Maslow believed that the nature of man is to push forward to a higher need once a lower need is satisfied, and that, at every level of society, people cannot rest content with their lot and are driven to improve wherever possible, thereby slowly ascending the Hierarchy of Needs.

> *We may still often (if not always) expect that a new discontent and restlessness will soon develop, unless the individual is doing what he, individually is fitted for.*

Maslow placed lower in the hierarchy, the Needs that he saw as deficient in that they sought to compensate for discomfort, lack of safety or love. On the other hand the 'meta-needs', or what Plato termed 'better desires', were associated with, for example, the yearning for justice, beauty, goodness and order. To illustrate his theory, Maslow described the development from basic society, where food and shelter and safety were salient needs, towards a more settled society where leisure and security allowed the luxury of the pursuit of knowledge, wisdom, and the time to develop talents and insights, which he termed '*Self-Actualisation*'.

However Maslow does make a proviso that to allow progression from the Basic Needs to the higher Needs there must be basic freedoms, which he describes as follows:

> *Such conditions as freedom to speak, freedom to do what one wishes so long as no harm is done to others, freedom to express one's self, freedom to investigate and seek for information, freedom to defend oneself, justice, fairness, honest and orderliness in the group are examples of such preconditions for basic need satisfactions* (Maslow, 1943).

This need for human rights to exist in order for people to progress is a pertinent issue in Zimbabwe, and it is one of the interests of this research to monitor Health Club activities over the past five years during which there were few human rights and little security in Zimbabwe (Meldrum, 2005).

3.4.1. Survival: The Physiological Needs

At the lowest level of needs for human existence are the Physiological Needs. These constitute the basics of life (food, safe water, and clean air). These prerequisites for survival are also the minimal needs for a subsistence farmer in Zimbabwe, and under normal circumstances most farmers were in the past, able to produce enough food for their own family. Levels of water provision were also relatively high in Zimbabwe (See Table 8, Section 5.2) although these have too fallen with many reverting to unsafe water. At the time of the intervention safe water coverage was as high as 85% in most rural areas (NAC, 2000). However these physiological needs have resurged in the last five years as general standard of living has deteriorated with food shortages country-wide (See Section 4.5.1) and falling water provision (See Section 4.5.2).

3.4.2. Security: The Safety Needs

Once there is security of food and water, the next most important priority, according to Maslow, is survival, or as he terms it, the Need for Safety. In a peaceful society, safety may refer merely to the protection of personal freedom of expression, whilst in politically unstable countries, personal safety means protection from physical violence, and survival of life. In the Zimbabwean context at the time of the intervention (1999-2001) the Need for Safety was interpreted as a need for child survival, prevention of life threatening diseases and a social support network from the community. However in the subsequent five years during which there were three elections accompanied by political unrest, physical survival has been threatened by lawlessness, political intimidation and general insecurity of properly and livelihoods throughout the country, particularly in the rural areas (See Section 4.4.4).

3.4.3. Respect and Status: The Esteem Needs

According to Maslow (1954), if personal security is assured, and life can be lived without fear of attack, the Esteem Needs may become salient. Esteem refers to the need for respect from fellow citizens, from family, and the desire to elicit approval and respect from peers. In this context it is interpreted as the individual need to develop self-efficacy, self-confidence and a sense of personal achievement. Many cultures throughout Africa place a particular high value on respect for the elderly and the esteem of the in-laws is particularly important for success in marriage (Gelfand, 1979). This value of respect is also a major characteristic of Shona and Ndebele cultures in Zimbabwe (Section 4.2) and the qualities that are most valued in a wife are politeness and respectful behaviour (Weinrich, 1982).

3.4.4. Community: The Need for Love and Belonging

Similar to Esteem but on a more emotional level, is the *Need for Belonging and Love.* This need encompasses the sociability of people and the desire for affiliation and affection. Maslow (1954) justifies his inclusion of Love and Belonging in the Hierarchy of Needs:

> *A man who is thwarted in any of his basic needs is a sick man. This is a fair parallel to our designation as 'sick' of the man who lacks vitamins or minerals. Who is to say that a lack of love is less important than a lack of vitamins? Since we know the pathogenic effects of love starvation, who is to say that we are invoking value questions in an unscientific or illegitimate way, any more than the physician does who diagnoses and treats pellagra or scurvy?*

It would appear in the context of Shona and Ndebele culture, the need for belonging is particularly pertinent (Kriel, 1971) as values are based on the extended family, and importance of the clan. One of the key assumptions of this thesis is that as the trait of sociability operates on group consensus, rather than on individual achievement (See Section 5.2.2) the Community Health Clubs will be culturally appropriate in that they generate a sense of good rapport. 'Love and Belonging', otherwise referred to as 'common unity' is therefore a particularly relevant aspect of life in the rural Zimbabwean communities that this research addresses.

3.4.5. Intellectual Stimulation : The Cognitive Need

Maslow's studies for the Hierarchy of Needs were all with well-educated people, and at first (1943) he questioned whether the Cognitive and Aesthetic Need was likely to be as salient in uneducated people. These two Needs were only included in later work (1954). In this intervention, the Cognitive Need is understood as an important motivating force for semi-literate women. There is ample indication in Zimbabwe of the interest rural women have in learning (Burke, 1997; Auret, 1990) and how little outlet they have for intellectual activity constrained as they are by duties which ensure they are largely house-bound (Tichagwa, 1998).

> *Urban women are often better educated than their rural counterparts and more aware of gender inequalities. These rural-urban differentiations have put urban women in a better position to initiate programmes for women and to establish women's organisations. A*

challenge which more enlightened women face is how to match their self image with appropriate action for the entire women's population, but especially for rural women who have few alternatives to peasant agriculture. Their creativity is hampered by illiteracy, ignorance and lack of resources. The proliferation of women's clubs and women's income generating projects has not led to increasing economic independence. For the foreseeable future rural women will be dependant on peasant agriculture which men control. Without resources for alternative ways of survival, new strategies must be found to enable peasant women to break out of the peasant economy. (Tichagwa, 1998)

The question remains: Is the cognitive need salient in rural women and if so will they respond to opportunities to improve themselves through increased knowledge and skills? Community Health Clubs have given peasant women this opportunity and the research will provide interesting indications that the Cognitive Need is highly developed in semi-literate subsistence farmers in Zimbabwe.

3.4.6. Beauty and Order: The Aesthetic Need

Decoration and ornamentation represents an investment of considerable time and energy, and therefore can be taken as an indicator of a strong need for the aesthetic. This enjoyment of beauty and order, is a facet of local culture for which there are seldom resources. Superficial appearances may be considered a luxury, when many life threatening issues need to be addressed, and Maslow places the Aesthetic Need second highest in his hierarchy. However, during the course of the intervention there was substantial empirical evidence of the pride that women took in their homes, beautifying their kitchens and utensils, (See p.196, Fig. 22, kitchen in Makoni, and p.259, Fig. 24, kitchen in Tsholotsho). Club members were also aware of their own physical presentation at Health Club meeting, investing time and their own money to make uniforms and appear smart.

3.4.7. Achievement: Self Actualisation

At the highest level of the hierarchy is *Self Actualisation*, the desire for the fulfilment of self. This concept is formed largely by Maslow's observation during his research on the well educated elite of Euro-America. His concept of Self Actualisation is explained as follows:

A musician must make music, an artist must paint, a poet must write, if he is to be ultimately at peace with himself. What a man can be, he

> *must be. This need we may call self actualisation.... It refers to man's desire for self fulfilment, namely for the tendency for him to become actualised in what he is potentially* (Maslow, 1954).

In order to be relevant to this research, this idea needs to be translated into a more universal concept that will account not only for the desire of the privileged to improve their talents, but also for those amongst the poor who strive to achieve.

Self Actualisation is not the sole domain of men: equally, what a woman must be she must be! Research into women's perception of their *raison d'etre* in this intervention reinforced well-documented Shona and Ndebele values placed on maternal fertility (Tichagwa, 1998). Women identified that their prime *raison d'etre* was to look after their families. By implication therefore, being a successful mother would justify self-fulfilment of a woman's existence (Auret, 1990). While these conservative gender values may be considered limited by feminist standards (Tichagwa, 1998), Self-Actualisation for a rural mother is taken to mean achieving proficient women-hood: to be well-informed, wise, progressive, respected, polite, clean and smart, and in accordance with cultural mores, able to run a homestead, and raise children that will make the husband proud before his own family and clan. Therefore to operationalise Maslow's concept of Self Actualisation when applied to the culture of subsistence farmers in Zimbabwe which attributes high value to motherhood (Auret 1990), it has been explained in simple terms as the ability to become a 'Good Mother' (See Section 4.2.2).

Maslow (1954) describes a society, which thwarts the ability of its citizens to fulfil any of their basic needs, as a society is in a state of sickness. This approach reflects the holistic definition of health as identified in the Ottawa Charter (1986), which defines health is terms of social and structural factors as well as disease reduction.

3.4.8. Frustration Tolerance

One of Maslow's most interesting insights (1943) that may be applied to rural development is the psychological 'fall-out' that occurs in later years as a result of the lack of satisfaction of needs in early childhood. He contends that if, for example, the basic need for safety is satisfied before the age of two, then the adult will be well adjusted and able to cope with threatening situations because a basic sense of security has been established that cushions later frustrations. This stoicism in the face of extreme hardship and poverty he terms 'frustration tolerance' and the term epitomises peasant resilience in Zimbabwe. Maslow demonstrates his ideas about psychological fall-out by looking at children's reactions, because these are more

clearly expressed than the reactions of adults, who tend to hide their feelings in public. He concludes that the deep fear of insecurity, developed in childhood, will condition the adult into primarily seeking personal safety in later life and terms this a 'safety seeking mechanism'. Allport (1953) entered into a debate with Maslow to clarify the difference of physiological needs between infants and adults, arguing that whilst infants may be motivated primarily by the need for food, mature adults possess a functional autonomy of motives. He argued that the higher needs such as Self Esteem, can develop independently from the Basic Needs (Physiological and Safety Needs).

3.5. APPLYING MASLOW'S HIERARCHY OF NEEDS

Maslow's (1954) insights into human nature have provided a rational framework for the satisfaction of human needs, but he never empirically demonstrated his model in the field. Maslow's work has challenged a few social psychologists to put his model to the test at community level. This study intends to test Maslow's Model (See p.54, Section 3.4, Fig. 3 and p.223, Fig. 23) in Community Health Clubs to establish if the hierarchy can explain the needs of subsistence farmers, and particularly women, in Zimbabwe.

3.5.1. The Need for Security

An interesting study was done by Aronoff (1971), who tested the Need for Security with Pacific islanders, (one group of fishermen and another group of sugar cane cutters), using a simple sentence completion test based on their means of livelihood. There was less financial incentive to become a cane cutter, although it offered more security but Aronoff demonstrated that cane cutter's need for security outweighed the financial incentive of being a self-employed fisherman. He showed that their choice of job could be attributed to a basic insecurity in their outlook, as those in need of security were correlated significantly with those who before the age of twelve, had experienced death of a parent or sibling. This confirmed his hypothesis that adult occupation is often motivated by needs established in childhood.

3.5.2. Need for Self Esteem

Ward and Wilson (1980) conducted a social experiment that related the Need for Self Esteem to peer pressure. Using Aronoff's method of sentence completion, the experiment was conducted on women undergraduates in the United States of America that had been assigned into two groups: those high in the Need for Safety and those high in the Need for Self Esteem. Those who scored high in the Need for Safety

tended to change their opinions and lower their moral reasoning in response to peer pressure, whereas those high in self-esteem remained convinced of their original verdict and did not bow to group pressure. The conclusion that could be drawn from this is that by developing Self Esteem, (self-efficacy, Bandura, 1997), women may be more equipped to maintain their own course of action despite peer pressure. Alternatively if a person is low in Self Esteem, they will rely on peer pressure to justify their belief.

The Hierarchy of Needs provides a framework within which human needs can be analysed in seven discreet categories. This enables analysis by which the Health Club members can evaluate their own priorities and their motivations for joining the Community Health Club. This technique using pair-wise ranking to compare the different categories of needs (as defined in Maslow's Hierarchy of Needs) is described in Chapter 7 and the results of the exercises done with seven Community Health Clubs are described in Chapter 8.

3.6. THREE POSITIVE MOTIVATIONS OF HUMAN BEHAVIOUR

Murray (1938) identified a list of what he considered were universal human needs. The most interesting for this research are the Need for Achievement (*n Ach*), the Need for Power and the Need for Affiliation, which have been extensively investigated in studies associated with the theories of McClelland (1984). As the Need for Power, Affiliation and Achievement are key concepts used in analysing the attraction of the Community Health Clubs, these concepts are explained in more detail below.

3.6.1.The Need for Achievement

The Need to Achieve is a human motivation based on the Variety Incentive, which is three-part process: sign stimulation, natural incentive and change. Curiosity or the variation from expectancy (the sign stimulus) triggers an interest and pleasure in learning (natural incentive), which then leads to the exploratory behaviour known as change (the consummatory experience) (McClelland, 1967). An individual that ranks high in the *n Ach* has been characterised as one who likes to take personal responsibility for a job and be self-directed, who enjoys feedback from moderately challenging tasks that best demonstrate his/her degree of proficiency, and who constantly adjusts their goals to improve their skills (McClelland, 1967).

McClelland (1984) maintains that the Need to Achieve is not determined by national, climatic or physiological characteristics, as was previously assumed (Huntington, 1915), but by the *degree* of challenge from each social environment. The degree of

challenge is contingent upon values held within the society, and these values change as civilizations rise and fall in influence and creativity. Levels of *n Ach* vary across nations and time and can be measured. This cultural explanation for progress, follows the ideas of Weber (1904, 1930) who showed how cultural values of hard work and thrift gave rise to the Protestant work ethic in 18th century Europe, and the beginning of western capitalism. McClelland (1967) found that level of *n* Achievement can be determined in a number of ways: by assessing national levels of productivity based on power consumption, analysing the dominant themes and values in popular art, theatre and literature, as well as variations in child rearing practices. National fluctuations in energy consumption were also used to measure changes of achievement levels in longitudinal studies throughout different periods of history showing the rise and fall of achievement levels correlated with times of expansion of those nations (McClelland, 1987). One method of measuring *n* Achievement has evolved from a system of coding pictures developed by Murray (1938) in controlled experiments. Later studies measured levels of *n* Achievement across a variety of cultures in America, Germany, Italy and Japan (McClelland et al., 1955; Winterbottom, 1958; Rosen 1959; Veroff et al., 1980). McClelland shows how literature that was developed for schools was used to inculcate values of high achievement, and that popular songs and plays can be used to modify values (McClelland, 1987).

The importance of these studies to this research, is that McClelland's work shows that high or low achievement levels are not innate to any particular country or culture, but that they can be moderated according to the *cultural norms* of the period. By implication this also means that as values can be adjusted by literature and visual aids in schools, so can this process of social engineering be applied in the community. The Community Health Club Model proposes that by creating a culture of health, values will change from cyclical worldview to a linear worldview and levels of *n Ach* will rise. Curiosity which leads to pleasure in learning, which then results in changed hygiene behaviour, is the objective of the Community Health Club Approach. (See p.106, Section 5.4.3)

3.6.2. The Need For Affiliation

The Affiliative Motive can also be divided into three stages: The need of physical contact (touching, hearing or seeing another person) is the sign stimulus, which leads to the feeling of loving or being loved, and joy (the natural incentive) and to the consummatory act which is seeking and exchanging contact with others, (McClelland,1987).

Affiliation is '*the concern over establishing, maintaining or restoring a positive affective relationship with another person or person*' (Atkinson, Heyns and Veroff, 1954). The

Need for Affiliation is may be compared to the Need for Love or Belonging (Maslow 1954) (See p.57, Section 3.4.4). Human beings are social by nature and appear to have a basic desire to be with other members of their species (Morris, 1987). The strength of this need varies from person to person according to inherent traits, skills and opportunities and in different societies in which culture either encourages or inhibits the affiliative tendency (Morris, 1987). McClelland and his associates researched the variations between individuals and between nations in an effort to find underlying principles that trigger the motivation towards affiliation.

High *n* Affiliation is characterised by a concern for social approval and acceptance, which is a stronger incentive than the personal pleasure of self-achievement. People high in Affiliation apparently have the following characteristics: they are more sensitive to other people's facial expressions and body language, they learn social relationships more easily and engage in more dialogue with others to keep all social networks operative (Lansing & Heyns, 1959, Boyatzis. 1973). People with high *n* Affiliation prefer friends to experts as working partners (French and Chadwicke, 1956) and tend to give feedback on how well the group is doing rather than how well they themselves are performing. The inverse of *n* Affiliation is fear of rejection by peers (See Section 3.7).

In societies where survival depends on people's interdependence, the avoidance of conflict is an important survival mechanism. This means people depend on each other rather than on personal strength. It follows that people with high levels of affiliation will operate more effectively in groups. Consensus is an important cultural mechanism. On the other hand people with a high Need for Achievement tend to relish personal challenges even at the expense of alienating peers. Therefore *n* Affiliation is an important psychological trait which may explain the group dynamics at work within the Health Clubs.

Classic social experiments on conformity (Asch, 1955) show how people in general conform to group pressure if exposed to persuasive argument even if they can see the group decision is demonstrably false. McClelland, (1967) did content analysis of folk tales in different societies to measure levels of *n* Affiliation as he believed like *n* Achievement that popular literature can indicate the collective concern for affiliation. Countries also vary in their n Affiliation with some showing more respect for civil rights and amount of value placed on family and children. Indicators used included levels of wife beating and infanticide, residence distance of daughter, frequency with which children are obedient, and dependency on others for help in adulthood (McClelland et al., 1972). Other studies have shown societies high in *n* affiliation tend to have lower psychogenic death rates from homicide, suicide (Durkeim, 1895), ulcers, cirrhosis of the liver and hypertension (Barett and Franke, 1970). More recent research on Social

Capital (Kawachi et al., 1996) show how levels of heart disease and other stress related disease have diminished, in American states high levels of Social Capital have been measured. Even levels of crime have been reduced where there are strong social networks which fulfil the need for affiliation (Kawachi et al., 1999a).

3.6.3. The Need For Power

The third of the three positive motivators of human behaviour is the Need for Power. Assertive behaviour can be a disruptive social force, there is often considerable socialisation during childhood to suppress the Need for Power. However those high in *n* Power are likely to demonstrate this need in adulthood by culturally condoned behaviour. As expected, individuals with high *n* Power are more competitive and assertive, enjoying sport and argument, and choose occupations where they are in a position to influence people, such as being teachers, psychologists, ministers or journalists.

In Zimbabwe, patriarchal values in the Shona and Ndeblele cultures, reinforced by Christian values of obedience and meekness before their husbands have largely succeeded in sublimating women's Need for Power (Tichagwa, 1998) (See p.75, Section 4.2.3). Some urban women are beginning to claim equity with men, although women's participation in formal decision-making structures is still minimal. Even in industrial nations where the feminist movement has been successful in achieving gender equity since 1960's, women still tend to be more socio-centric than men, and less interested in power. One study (McClelland 1975), shows that women tend to join voluntary organisations, loan their possessions more frequently and enjoy helping others, all affiliative qualities rather than indicative of a need for power. With a low need for power, women will tend to leave the management of their lives to men, so reinforcing the status quo, and entrenching cyclical world-view. To counteract this marginalization of women a need for Power should be developed through the building self-efficacy (Bandura, 1997) in each woman.

Dominance feeling is a concept that can be compared to self-efficacy. It is the basic attitudinal response of an effectual person; one who is able to manage his/her own affairs without recourse to external support. It is this quality which is most important in the context of empowering women (building the Need for Power) as a positive assertive quality that can induce the capacity to change. The opposite is Low Dominance Feeling which inhibits decision-making and action, and typifies attitudes amongst those who feel disempowered. Table 6 below, shows the attitudes to be found in those with Low and High Dominance Feeling. Empowerment is the transformation which happens

when a person changes from attributes of Low Dominance Feeling to those of High Dominance. This is the process which takes place during the time spent at weekly health sessions over a period of between six months and a year (See p.108, Section. 5.5).

Table 6: *The attributes of dominance and lack of dominance feeling* (McClelland, 1987)

LACK OF DOMINANCE FEELING	DOMINANCE FEELING
Uncertainty, lack of confidence	Self-confidence
Feeling of general inferiority	Feeling of self-esteem
Shame or lack of pride	High self respect and evaluation of self
Weakness, admiration for others	Conscious feeling of 'superiority'
Feeling of being looked down on	Feeling of sureness with respect to other people
Wanting to be like others	Feeling that others do/should admire/respect one
Wanting to be dominated by others	Feeling of mastery
Lack of faith in oneself and in one's abilities	Feeling of being able to handle other people
Feeling shy, inhibited, timid, unworthy	Absence of shyness and timidity
self-conscious and embarrassed	Absence of self-consciousness, or embarrassment
Dissatisfaction with ones self	Feeling of pride
Lack of calm, ease, natural assurance	Feeling of general capability
Restraint and tension	Forcefulness of personality, strength of character
Fearfulness of high dominance people	

3.7. FEAR OF FAILURE AND SUCCESS

The fear of failure, is a powerful determinant of behaviour, which is strongly associated with the need for social or parental approval and can be responsible for negative achievement. People are afraid to fail because they might appear foolish in public, therefore they are not prepared to risk loosing face. This is a competitive instinct similar to animal behaviour where animals seldom engage in fights unless they have a chance of winning. The display dances and mock attacks help them to gauge whether they have a chance. If they realise they are significantly less than their opponent they will back off for self-preservation (McClelland, 1987). 'Saving face' in human behaviour, is a way to maintain self esteem, and respect from others. People low in *n Ach* fail more regularly than others, because they are poor at gauging their own capacity: they tend to set themselves unrealistic targets. Those high in *n Ach* have been found to set realistic targets which they know they are able to achieve with a reasonable amount of effort. The reason they do this is that they enjoy measuring their own success by giving themselves achievable objectives. Once the target is met they proceed to the next level, satisfied with the knowledge they are within reach. By contrast, unrealistic targets usually result in

failure which further reinforces an individual's perception of themselves as inadequate (McClelland, 1987). The ability to set realistic targets is important in development programmes, where women are being empowered as they need to develop their self confidence which in turn increases self-efficacy (Bandura, 1997) – their perception of their own ability to succeed.

In development programmes planners must ensure that cycle of 'failure/self-doubt/poor targeting/failure' is avoided by planning realistic targets with the community to ensure that they reach the standards they had set for themselves. Failure to achieve set targets will further damage the self-efficacy of women. It has further been shown that children who grow up with *'parents who are strongly authoritarian, rigid, and punitive tend to produce children with strong fear of failure'* (Hassan, Enayatullah & Khalique, 1977) often suffer from fear of failure. As many traditional societies in Africa tends to bring children up in this way, it is difficult for adults, particularly women who are doubly suppressed, to shake off their training from childhood, and rise up with confidence to try something different (Tichagwa, 1998).

Another manifestation of the avoidance motives is Fear of Success, and this is also relevant for our own study. Rural women in particular may fear success because it may draw negative criticism from custodians of traditional values such as the acceptance of female subordination. Overcoming these de-motivating aspects may be the key to promoting progressive behaviour.

3.8. SOCIAL EPIDEMIOLOGY

Psychoanalysts examine individual psyche and make generalisations on the nature of humans. In first sociologist, Durkeim (1895) saw society not merely as the sum of its individuals, but as a 'social fact', an organism with a characteristic *modus operandi* of its own.

> *... the group thinks, feels and acts entirely differently from the way its members would if they were isolated. If therefore we begin by studying these members separately we will understand nothing about what is taking place in the group* (Durkheim, 1895).

He demonstrated that even suicide, considered the most personal of actions, can be correlated with collective features of society. He showed that the national rate of suicide is contingent on the levels of social cohesion within the society.

A cohesive society is marked by:

> *an abundance of mutual moral support which instead of throwing the individual on his own resources, leads him to share in the collective energy and supports his own when exhausted* (Durkeim (1897, 1997).

Following this functionalist perspective, James Coleman, developed the concept of Social Capital, and identified a variety of forms: levels of trust within a social structure, appropriable social organisation, norms and sanctions and information channels. These group dynamics all share one distinctive feature – they are a *social* good, a feature of the *collective*, as opposed to a private capital, which is personally owned and cannot be easily accessed by another. Social Capital is distinct from 'social networks', which are measured at the individual level in terms of the strength and number of linkages to friends and family. Social networks are therefore proxy indicators of Social Capital, arising as a *by-product* and not as a result of conscious investment on the part of the member. Kawachi and Berman (2000) define social cohesion as *'the extent of connectedness and solidarity among groups in society.'*

This will affect the level of Social Capital, defined as *those features of social structures – such as levels of interpersonal trust and norms of reciprocity and mutual aid – which act as resources for individuals and facilitate collective action'* (Coleman 1990; Putnam 1993a). They consider that there are three main ways that Social Capital could influence individual health at the neighbourhood level: *'by influencing health related behaviours, by influencing access to services and amenities and by affecting psychosocial processes.'*

Coleman illustrates this concept with the case of a residents' association in an urban housing project, which initially formed for the purpose of maintenance of the property but remained in existence after the problems were solved because it enabled the quality of life to be improved in many other ways. The main feature of Social Capital is that it is external to the individual, a feature of the collective rather than the private. Social Capital, although not as tangible as financial capital, is a resource that can be used in the same way. Unlike money which is a private good, Social Capital is a public good, which can be freely resourced by any members of the community whether they have helped to develop it or not. For example, only *some* parents give their time to develop a parent teachers' association to assist a school, but *all* pupils will benefit whether their parents have contributed or not (Coleman 1988).

When Social Capital is absent, in times of social disintegration (war, displacement or anomie), the levels of personal tension can be expected to create psycho-somatic problems which affect levels of crime, youth behaviour, political involvement, and educational attainment. In addition, it is now being shown that levels of Social Capital also impact on public health (Kawachi et al., 1996). Putnam (1993b;1995) demonstrated that lower levels of

trust were associated with higher coronary heart disease, malignant neoplasms, cerebrovascular disease, unintentional injury and infant mortality. Kawachi et al., (1994, 1996, 1999a) carried out a series of multilevel study of the relationship between Social Capital and self-rated health associated with heart disease.

Social Epidemiology, is a relatively new specialisation within the discipline of Epidemiology and it is less concerned with measuring health outcomes, as opposed to conventional epidemiology and is focused on population health. It is a field *'defined by our concern for describing and intervening on social conditions that either promote or harm health.'* By identifying the root cause of social malaise instead of individual causes for sickness, Social Epidemiology can highlight social solutions, which can be more readily addressed in development, thus addressing the determinants of health (WHO, 1986). This research, and the development of the Community Health Club Model, sits comfortably within this discipline.

3.9. SUSTAINABLE LIVELIHOODS

Whilst the field of Social Epidemiology is providing studies that focus on Social Capital, the concept has been further widened across all development sectors in the Sustainable Livelihoods Approach (DFID, 2000). Apart from the usual concept of Financial Capital and Social Capital (as outlined above) there are, in addition, three other assets which are also a form of capital: Human, Natural, and Physical Capital. Rather than focusing on people's problems the Sustainable Livelihoods Approach seeks to build on people's resources (the five assets) and their own strengths to alleviate poverty. Thus good health becomes one of the enabling factors (a human asset), but health is not seen in isolation but is within a broader scope of development. The entry point for Sustainable Livelihoods can come from any sector but with this horizontal approach (See p.32, Section 2.3.2) it is a reiterative diagnosis and design process that progressively expands across all sectors, including Education, Agriculture, Marketing and Health. Thus the determinants of health, the most basic of which is poverty, are being addressed. All the guiding principles that define the Sustainable Livelihoods Approach (people centred, participatory, inter-sectoral, holistic development and an emphasis on long term sustainability) are also key concerns in the Community Health Club Model.

3.10. SUMMARY

The study hopes to understand whether Community Health Clubs have meet the needs of the target population in terms of Basic Needs, Safety and Esteem Needs and a sense of Belonging (Maslow, 1967). It will also examine whether Self Actualisation can be realised in a peasant context as a striving to provide high standards of family care. Understanding the process that produces motivation is vital in disaggregating human behaviour. If natural

incentives are predictable, we should be able to manipulate the environment to provide the sign stimuli that create affective arousal which would lead to the consummatory act that we hope to engender. The motive to change behaviour could be stimulated by the same triggers as the Variation Motive. McClelland's (1987,1965) concept of the Need to Achieve, the Need for Power and the Need for Affiliation are basic drives that may be affecting the attraction and adherence to Community Health Clubs. Conversely, Fear of Power and Fear of Failure have undoubtedly been some of the many reasons why women, in particular, have failed to take control of their lives. In addition the attraction of the Health Clubs may be explained in part by variety as an incentive. The development of Self-efficacy as identified by Bandura (1977), is a key aspect of the method used within health promotion training, leading to a competent community (Fellin, 1987) with the confidence to manage its own health. Social Capital is a concept that can be applied to the levels of trust which are developed with Community Health Clubs and the model can be positioned under the umbrella of a Sustainable Livelihoods approach, as it shares all the key assumptions that make both holistic, horizontal and sustainable means of alleviating poverty and improving quality of life.

Chapter 4: Background to Zimbabwe

Summary:

This chapter turns to the geographical area of the intervention, namely Zimbabwe (formally Rhodesia) in Central Africa.

Section 4.1. provides basic information on the **demography**: the population, ethnic groups, language and religion of Zimbabwe.

Section 4.2. describes the elements in **Zimbabwean culture** relating to gender issues (Auret, 1990) that have informed the Community Heath Club approach.

Section 4.3. looks briefly at the cultural value of sociability and rapport

Section 4.4. provides a socio-political context for the achievements of the Community Health Club intervention.

Section 4.5. identifies how **Determinants of Health**, food security, safe water, sanitation, and literacy levels have affecting levels of health in Zimbabwe.

Section 4.6. provides **a disease profile of Zimbabwe** and discusses the top six causes of hospital admission for children under five at National level (Unicef, 1999; NAC 2000).

Section 4.7. shows how two early **philanthropic efforts** may have paved the way for the rapid spread of women's groups after Independence.

Section 4.8. highlights a study on lessons learnt from health education in Zimbabwe and provides background to the regional PHAST initiative which introduced participatory methodology into Zimbabwe in 1994.

MAP OF ZIMBABWE SHOWING PROVINCES AND INTERVENTION AREAS

Key

- CHC Intervention Districts
- Main Towns
- Predominantly Ndebele Provinces
- Predominantly Shona Provinces
- International boundaries

4.1. DEMOGRAPHY OF ZIMBABWE

4.1.1. Population

In 1999 there were estimated to be 12.5 million Zimbabweans (Unicef 1999a). The population growth rate fell from 3.1% in the 1980's to 2.0% in 2001 (WHO, 2002). This may be attributed partly to the success of the Government campaign to control fertility (Tichagwa, 1998), but also to the devastating impact of HIV/AIDS with over 24.6% of people infected (WHO/Unicef, 2004). Mortality rates have risen sharply, and the population is now estimated at 11.6 million (UNDP, 2005) with a fertility rate of 4.7 (WHO, 2002) and life expectancy of 33 yrs (Unicef 2003) (See Table 9, below).

Table 7: Development indicators of Zimbabwe

Development Indicators:		**Date**	**Source**
POPULATION			
Total Population	11.6m	2001	UNDP (2005)
Dependency Ratio (per 100)	95	2001	WHO (2002)
% population aged 60+	4.7	2001	WHO (2002)
Annual Growth Rate	2.0	2001	WHO (2002)
Urban Population % of totat	26%	2001	Abacci, (2001)
HEALTH			
Life expectancy	33	2003	Unicef (2003)
Annual births /1,000	409	2003	Unicef, (2003)
Annual under 5 deaths/1000	52	2003	Unicef (2003)
Total fertility rate:	4.7	2001	WHO (2002)
Infant <1yr mortality rate per 1,000	78	2002	Unicef, (2003)
Maternal mortality rate per 10,000:	250-400	2000	Abacci (2001)
Population HIV positive	24.6%	2004	Unicef, (2004)
Population with access to health services	77%	1997	UNDP, (1998)
Population with access to safe water: Rural	74%	2002	WHO/Unicef (2004)
Urban	100%	2002	WHO/Unicef (2004)
Population with access to safe sanitation:	57%	2002	WHO/Unicef (2004)
% under 5's malnourished	21%	2003	AFRODAD, (2003)
Government spending on Health %	3.1 GNP	1998	AFRODAD, (2003)
EDUCATION			
Adult literacy rate women	75%	1998	Unicef, (1999)
Adult literacy rate men	86%	1998	Unicef, (1999)
Enrolment at primary school: girls & boys	85%	1998	Unicef, (1999)
Government spending on education	7.1 GNP	2003	AFRODAD, (2003)
ECONOMY			
Human Development Ranking	145	2003	UNDP, (2003)
Gross National Product (GNP)US$	5.4 bn	1994	UNDP, (1994)
Gross Domestic Product per capita (PPP.US$)	2,280	2001	UNDP, (2003)
% pop living on <US$1 per day	36%	2000	AFRODAD, (2003)
Annual Growth rate	0.26%	2002	Abacci, (2004)
Annual rate of inflation	320%	2003	UNDP, (2005)
Foreign Debt in US$	4.37 bn	2000	AFRODAD, (2003)
Spending on Debt service	16.6 GNP	2000	AFRODAD, (2003)
Unofficial Exchange Rate Z$: US$	45,000	6/2005	Zim New (30.7.2005)
Official Exchange Rate Z$: US$	17,000	12/2004	" " " "

4.1.2. Language

The language spoken by 71% of Zimbabweans is Shona; the Ndebele comprise 16% of the population, whilst only 11% of the population belong to the minority Venda, and Shangaan in the South and to the Tonga. Whites of European descent and Asians comprise less than 1% each of the total population. English is the official language and is taught at primary and secondary school. It is estimated that over 85% of the population can read and write English (Unicef, 1999a; Auret, 1990).

4.1.3. Ethnic Groups

The Tonga are the only original inhabitants of the country, descended from hunter-gatherers, a sedentary remnant living along the Zambezi River in the north. The Mashona, the majority ethnic group, tend to be settled mainly in the provinces of Manicaland, Mashonaland Central, Mashonaland East and South, and Masvingo Province. The Ndebele who arrived in the 19th century are a migratory offshoot of the Zulu nation from South Africa. They took over land from the Shona and settled largely in the south-west of the country in Matabeleland North and South. Midlands Province is a mixture of both main ethnic groups. The Shona and Ndebele people now share many common practices in their cultural values, norms and their religion. European settlers arrived from 1890 onwards, colonising the local population and taking control of the land until Independence in 1980 (See Section 4.4.).

4.1.4. Religion

Conventional denominational Christianity is practised by 25% of the population with a belief in *Mwari*, the divine creator now cast in a Christian mould. There is also a 50% following of the charismatic Apostolic churches that fuse ancestral belief within a Christian biblical context (Unicef, 1999a). Christian values are a part of life in most homes, and prayers are normal before all meals and at public meetings (Gelfand, 1984). 24% still adhere purely to traditional ancestral spiritualism, and less than 1% of the people are Muslim or hold other beliefs (Abacci, 2000).

4.2. GENDER AND CULTURE IN ZIMBABWE

In this section we consider a few of the cultural gender-related practices that may have impacted on the intervention and sources include Auret (1990), Tichagwa (1998) and Gelfand (1984, 1977), Kriel, (1971) and Weinrech, (1982). Women make up over 80% of most Health Clubs and so it is particularly important that their outlook and daily problems are well understood. How the girl chid is raised, how she has been socialised

to behave in her own family will condition her responses to the outside world, and her ability to adapt. Her rights within marriage, the traits considered appropriate for a good wife, and the implications should she be divorced or widowed all will impact on her ability to be an active member of the Community Health Club. These insights into local practices should provide background as to how Community Health Clubs can build on existing cultural norms or assist the members to change their practices without fear of failure (See Section, 2.7) or jealousy. As many women are self-depreciating and shy in public, this may mean developing self-efficacy, self-confidence and social networks between significant others, which may allay the fear of overt individual change.

4.2.1. Child rearing practices

In the rural areas of Zimbabwe, girls are still brought up to show a deferential attitude to men; they are generally servile in their dealings with all males, including adult sons (Gelfand, 1964). There is considerable gender imbalance within the family, and sons will be favoured regarding education and other opportunities as girls' training is considered to be lost to the family when they marry out (Tichagwa, 1998). However, a girl who is well educated can fetch higher roora / *lobolo*[1]. As a *chipanda*[2] her lobolo, would pay for her brother's marriage and this would earn her a special relationship with his offspring. Girls are trained from an early age in domestic duties and may be kept from school to perform them if necessary. The game of 'housey-housey' or '*Mahumbe*' is traditionally set up by the elders for girls and boys to teach them correct marriage behaviour in Shona society (Burke, 1996). Girls are kept under control and close to home in the school holidays, whilst boys may roam freely with their herds.

Ndebele girls and women traditionally crouch or sit when talking to a man to show respect, and kneel when offering beer or food. If husband and wife are both seated she should sit behind him. Although she can ask politely, a woman seldom dictates to her husband (Hughes & Van Velsen,1955). Over the past twenty years since Independence in 1980, these traditional roles and responsibilities are being increasingly abandoned as practicalities intervene and levels of education differ between generations.

The decrease in the role of the *vatete*[3] as a wise advisor on personal problems has been unfortunate, as this was one of the most positive aspects of Shona culture to be abandoned (Auret, 1990). As families become urban and nuclear, the inaccessibility of the *vatete* (who may often be in the rural homeland), means that the knowledge that she had traditionally given is now often lacking, and many children grow up ignorant in sexual matters, as parents still avoid this duty (Tichagwa, 1998). Recently there has

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[1] Bridewealth, paid by the future husband to his future in-laws in order to seal a marriage agreement.
[2] A sister linked by provision of bridewealth.
[3] A favourite auntie, designated to be a personal advisor, especially on sexual matters and marriage.

been a call for sex education in secondary schools to replace this information gap created by a shifting culture, although this is opposed by some churches.

4.2.2. Division of roles within marriage

> *Reproduction and production were intimately entwined and embodied in the roles of women. Through marriage a woman ensured the continuity of both her own and her husband's group, and through her involvement in agriculture she provided the food to sustain that life. The responsibility for life was thus centred on the woman. Fulfilment of these roles was the source of a woman's status and influence.* (Auret, 1990. p.98)

In both Shona and Ndebele culture, women work the fields, whilst men are concerned with livestock and there is little role-confusion as each is an important aspect of the whole. Men take care of the public sphere whilst the women accept domesticity. Despite her lack of influence outside the family, a woman in traditional society had considerable authority and status as a mother and a provider. A woman's position in her husband's family rose with the success of her motherhood: her ability to provide descendants, particularly males. Once past menopause she was considered wise and above reproach, and allowed to brew traditional beer and offer libations to the ancestral spirits. As a grandmother her authority was unquestionable, and she held a respectable place as the custodian of tradition (Auret, 1990). Transition for women with their lack of marketable skills and inexperience in the public realm in a modernising society based on formal employment and wage labour, is more challenging than for men as explained below:

> *Women are not merely an aspect of society: they are its very core. They have been the most affected by the society's transformation from small scale to large scale society; from a society characterised by intense personal relations to one based on impersonal relations: from a society where the desire for harmonious relations maintained a balance between the formal traditional authority of the male and the informal power and influence of the women, to a society where relationships were formalised and codified and were therefore no longer flexible.* (Auret, 1990. p.97)

This transition stage is when the Community Health Clubs can provide a safety net for women in the process of change. This process is described in the Cyclical-Linear Model (See p.95, Section 5.1.2)

4.2.3. Marriage

The liberation of women within the last twenty years has meant that many of the traditional practices that protected and controlled women have been abandoned. Traditionally, in a customary marriage, bridewealth was paid by the groom to the parents of his future wife. This ensured that not only the husband, but also his kin, gained control over the woman's social and biological productive and reproductive capacities (Auret, 1990). A new wife coming into the husband's family is treated by the mother-in-law as a servant for the first few months, until the girl has learnt to respect her new family. Therefore, if the Community Health Club can provide an opportunity for a daughter-in-law to enhance her respect from her in-laws her life will be improved, as she will feel accepted and admired (See Annex 13.12). The wife and her children in fact belong to the husband's family, and she has few rights. If a wife is unhappy and tries to return to her own family they may refuse to have her back if they cannot repay the *lobolo.* Divorce is therefore difficult and marriage upheld by social pressure. A husband's conjugal rights over his wife means she dares not refuse to have sex even if he is known to be HIV positive.

However, particularly in urban areas, young people are increasingly choosing their own partners, with or without approval of their parents, who are surprised if they receive the customary bridewealth for their daughters. Contrary to a western perception of *lobolo* being a way of buying a wife, the traditionalist sees the practice as providing the wife insurance and guarantee of protection. If a woman has been married without the traditional payment of *lobolo,* she can be abandoned equally easily, and many fathers now have an irresponsible attitude to their offspring, seldom offering any financial assistance for their upbringing. On the other hand, a convenient misuse of the old ways is the practice of older men paying cheap *lobolo* for uneducated young wives in order to have unpaid labour for their fields (Auret, 1990, Tichagwa, 1998).

4.2.4. Admirable traits for a wife

Girls are socialised to be quiet wives: a survey of men and women (Weinrich, 1982) found that the qualities that are of most importance were:

- Politeness,
- Respectful behaviour,
- Faithfulness to husband and trustworthiness,
- Youth and beauty,
- Kindness,
- Cheerfulness,

- Maturity and responsibility.

Personal qualities were stressed more than skills, although good cooking and an ability to handle money well was mentioned. For men it was important that the woman was 'hardworking', but for women it was enough that the husband is 'supportive'. The Shona are more concerned than the Ndebele with marrying into a good family with its ascribed characteristics. However, in both ethnic groups, a woman is considered a minor all her life, and as a mother must defer to her grown sons (Weinrich, 1982). As an ideal wife is expected to be silent and respectful and leave all decisions to her husband, she is disempowered in the sense that her own self image is one of a facilitator for others rather than important in her own right. It is relevant that no mention was made of intelligence or ingenuity, as this may clash with male domination. She may have a fear of failure (See Section 3.7.) as she has little experience of achievement, or conversely she may be afraid to succeed and attract jealousy.

Despite the fact that most rural women under 40 years old, are as educated as the male members of their family, they still tend to affect a subservient role in public. Their culture demands them to be deferential towards men and therefore they seldom assert themselves easily in mixed company. One of the strengths of the Community Health Clubs seems to be that it can build self-efficacy within women where previously they had many characteristics developed through their culture of low dominance (See p.64, 3.6.3, Table 6).

4.2.5. Divorce and widowhood

In Zimbabwe, customary marriages can be registered under the Customary Marriages Act, and no parental consent is needed for persons over eighteen years. In the case of divorce, all immovable items belong to the husband, whilst movables such as furniture and kitchen utensils can be taken by the wife, who must not only leave the house but also the children to the husband's kin. Civil marriages are monogamous and can only be dissolved by death or divorce (Tichagwa, 1998). In the case of death of the husband, the wife may be remarried to one of his brothers, whilst if the wife dies one of the wife's sisters may be sent to replace the deceased to care for the children. Thus marriage is not an individual act but the combining of two extended families.

Being widowed is one of the most difficult situations for a woman, as traditionally women seldom live alone. If the widow is still capable of bearing children she is expected to be inherited by a younger brother of her deceased husband who will look after her children until they marry. If she is not taken over as a levirate wife, she is placed under the authority of her oldest son. Upon his marriage the eldest son takes over the affairs of his father's family and the cattle come to him. At this point his

mother's second husband is no longer responsible for her affairs and those of her children borne of her former husband. The stepfather is *told* of any proposed marriage of one of the children, whereas the eldest son has to *approve* the marriage and provide the bridewealth for his brothers. He retrieves bridewealth if a sister marries, keeping it in trust for one of his brothers (Gelfand, 1971).

4.3. CULTURAL VALUES OF SOCIABILITY AND GOOD RAPPORT

The Community Health Club Model (See Section 5.4) rests on an understanding that the appeal will be particularly to those high in the Need for Affiliation (See Section 3.6.2) and the related need for consensus.

The Shona and Ndebele people are alike in that they both set a high value on sociability; 'good rapport' is the basis on which friendships are established, and many proverbs illustrate the importance of friendship and common unity (Kriel, 1971). Conversation is characterised by good 'listener participation' with many verbal prompts to encourage the speaker, particularly in large crowds where unanimous exclamations rise from the whole crowd to puncture speeches. *'The Shona are great repeaters'* (Kriel, 1971), and the use of slogans in a group, and at rallies, are a popular method of bonding together in a united front. Dancing and singing is the glue of all social occasions and an opportunity to sing together promotes palpable joy and conviviality. Two of the main forms of communal enjoyment are eating together and listening to stories, which, as Kriel explains, fulfils a fundamental need:

> *...enjoyment in company is a select form of rapport. It strengthens the feeling of group solidarity, which to the African is a deeply satisfying form of bliss, resulting in an unwillingness, which may border on inability, to act individually* (Kriel, 1971).

4.4. SOCIO-POLITICALBACKGROUND

In 1965 the European settlers in Rhodesia, made a Unilateral Declaration of Independence and took power from British colonial control. This resulted in a prolonged armed liberation struggle by two main factions of black nationalists until the country became independent Zimbabwe in 1980. The Shona-supported party ZANU (Zimbabwe African Nationalist Union) won the first elections in 1980, with Robert Mugabe as Prime Minister, and later President. Ethnic dissention marred the first four years of independence and an estimated 20,000 Ndebele were massacred and the unrest only subdued when the ZAPU leader agreed to join a one party state under the ZANU- PF (Patriotic Front).

4.4.1. The growth of modern Zimbabwe: 1980 –1990

Independent Zimbabwe with a good infrastructure and reformist measures appeared to prosper economically under majority black rule for the first 10 years. The Marxist/socialist economy was characterised by government subsidies, price controls and a restrictive import policy. Many new Health Care Programmes had been successfully put into effect. The number of Health Centres and Clinics had increased from 247 to 1,062, and a study indicated that 71% of a sample had a health facility within 8 km of home (Auret, 1990). By 1984, a sample showed that 67% of children had been born with health personnel supervision, which was an 18% increase on the situation at Independence. Three years later it was estimated that 75% of all children had been fully immunised, as opposed to 25% in 1980.

The task after Independence was to build a single system of law that incorporated the aspects of customary law with no gender bias but which also reflected values important to the nation (May, 1979,1983). Women now have equal legal rights (The Legal Age of Majority Act, 1982; Labour Relations Act; Customary Law and Primary Courts Act, 1981; Matrimonial Causes Act; Sex Disqualification Act); they feature in all levels of society in Zimbabwe, and are especially prominent in the NGO sector (Auret, 1990).

4.4.2. The Economy

In 1992, the Economic Structural Adjustment Programme (ESAP) converted the country into free market economy (Unicef, 1994) whilst a devastating drought lasting for two years crippled the agricultural sector. Both these factors were held responsible for the decline in the economy, which started at this time (Unicef, 1994). Whilst economic deregulation and free market forces promoted international trade, the social effects of cost recovery in the health and education sectors impacted negatively on the poorest sections of the population (Unicef, 1994).

4.4.3. Decreasing Health

By 1996 the health budget had dropped from 3% to 2.1% of the GDP, its lowest per capita since 1980 (UNDP, 1996). Whilst health care had been free for those in the lowest income bracket immediately after Independence, once ESAP came into effect in 1992, most local authorities began to charge fees to maintain even basic services. Since 2000, the referral system has largely broken down due to lack of funding, fuel and transport, as well as the shortage of medical staff (Unicef, 2005). The maternal mortality rate is now between 250 and 400 per 100,000 (Abacci, 2000), but for each

death there are at least 20 maternal morbidities (Tichagwa, 1998). Life expectancy rose from 45 years in 1965 to 73 years in 1992 (Unicef, 1994), but as HIV/AIDS infection (See Section 4.6.7.) reached as high as 33% (NACP, 1998) this dropped drastically to 33 years (Unicef 2003). With the contraction of public spending, the social services are only nominally in place and the health and education of the population has suffered (UNDP, 2005). With the contraction of public spending, the social services are only nominally in place and the health and education of the population has suffered (UNDP, 2005).

4.4.4. Decline: 2000 – 2005

In 2000, a popular referendum rejected proposed changes to the constitution to entrench the President for life. Between 2000 and 2005, Zimbabwe was characterised by overt human rights abuses against those who opposed the state (Meldrum, 2005). The compulsory requisition by the Government without compensation and the unlawful resettlement of war veterans on more than 4,000 commercial farms, effectively destroyed within two years the large-scale agricultural production on which the economy depended. This resulted in a general exodus of the commercial sector and unemployment rose to over 70% (Meldrum, 2005). All major donors withdrew funding in 2001, undermining most development programmes, and many NGOs were abandoned.[4]

By 2005, Zimbabwe had become one of the poorest countries in Africa, ranked 145 on the UNDP Human Poverty Index Scale. The GDP had shrunk to 40% of what it had been in 1999, and in 2003 inflation rose to 320% (UNDP, 2005). The value of the Zimbabwe dollar fell from Z$ 50 to Z$ 35,000 to the pound sterling between 2001 and 2005 (UNDP, 2004). Chronic shortages of bank notes, fuel and staple foods have further demoralised the remaining population.

The parliamentary elections of 2001 and 2005, and the Presidential Election of 2002 further entrenched the existing regime in power, and Zimbabwe continued to be defiant in its isolation and defaulted on debt service obligations. In October 2000, the World Bank refused to continue loans and all major donors from the international community withdrew external funding, resulting in the collapse of many NGOs. In 2001, Zimbabwean debt amounted to US$4.5 billion, six times that at Independence in 1980. The Commonwealth suspended Zimbabwe in 2001, and Government ministries have been left without crucial external financial backing on which they had come to rely. In

[4] The NGO, Zimbabwe A.H.E.AD. was downsized to three field staff in Makoni, both major donors having simultaneously withdrawn in February 2001, and has had minimal funding for the past four years.

August 2005, the International Monetary Fund threatened to expel Zimbabwe. The Water and Sanitation Sector Annual Report for the year 2000 states:

> *Programme implementation in the year 2000 was undertaken under a very difficult environment characterised by high input costs and shortages, unfavourable socio-political environment, cholera outbreaks, heavy rains, weak national management structures and dwindling financial resources, added demands from national events such as the constitutional referendum, the Parliamentary Elections and the land reform programme. These were compounded by Public Sector reforms that negatively impacted on manpower levels.* (NAC, 2000).

The Community Health Club intervention described in this thesis took place between 1999 and 2001.

4.5. THE DETERMINANTS OF HEALTH

The determinants of health are affected by both the domestic and the public domain. For family health to improve both aspects must be addressed (Cairncross, 1996) as structural elements at the macro level have to be in place to allow the domestic domain to thrive. However, in Zimbabwe prerequisites such as peace, shelter, education, food, income, a stable eco-system, sustainable resources, social justice and equity (Ottawa Charter, 1986) have all been under threat. The Community Health Club intervention described in this thesis addresses mainly the domestic domain. However in the context of a disabling socio-political environment such as described above, this intervention may make little impact. The question is whether Community Health Clubs can sustain any health improvement in the face of failing health services, high unemployment, insecurity and food shortages that have disabled normally resourceful subsistence farmers. The section below focuses on food security, access to safe water and sanitation, as well as levels of education and literacy, all of which have been shown to determine health status (Sen 1999; Feachem 1984; Esrey 1990; Caldwell, 1986, Cleland and Van Ginneken, 1989).

4.5.1. Food Security

> *A person is food secure when they have the sustainable ability to obtain adequate food in a manner that is dignified and socially and environmentally acceptable* (Unicef, 1999).

Zimbabwe in the past had normally been food secure, with surplus to export to neighbouring countries (Auret, 1990). Today 70% of the people of Zimbabwe are still

subsistence farmers relying on the annual rains to produce maize for their family; for the past five years the rains have been unfavourable. In addition population increase, climate change and rapid desertification in the region have contributed to the scarcity of arable land, and this was further exacerbated by the unequal distribution of land in favour of large scale commercial farms on the most productive land. The poorly planned redistribution of the majority of commercial farms resulted in the national maize production, the staple food, dropping by 31% in 2000. (Woelk, 2001)

Although poor rains in the year 2000 provoked a drought throughout the region, neighbouring countries managed to avert famine with good management of resources. The food shortage was only chronic in Zimbabwe where after consecutive years of drought and mismanagement there are now, in 2005, five million people reliant on external food aid. It is estimated that over 60% of Zimbabweans are living below the poverty line (Abacci, 2000) with few resources left as a safety net. Whilst droughts (lack of rain) cannot be controlled, true famines (starvation) can be averted with good governance (Sen,1999). Widespread hunger has been a feature of the last few years.

Women's nutritional status is a measure of their general health. One proxy indicator for this is the birth weight of their children. A woman's health can be compromised by the increased nutritional demands of frequent pregnancies, and the fact that mothers in times of food shortage tend to feed their families better than themselves. Maternal morbidity is manifested by general bodily fatigue and anaemia, as well as poor resistance to infections (Tichagwa, 1998). Lack of access to arable land, limited skills and the premature death of the breadwinner are also causes of food shortage. It is a common survival strategy for women to trade sex for food, and this further increases their risk of infection of HIV/AIDS (Auret, 1990). With the economic depression, unemployment and the chronic food shortages nationally within the past four years (UNDP, 2005) it was estimated that 21% of children were malnourished by 2003 (AFRODAD, 2003).

This situation has been highlighted in order to put the present intervention into context. Health promotion to prevent common infectious diseases such as diarrhoea is almost irrelevant if there is general food shortage and people are preoccupied with survival. As the Community Health Clubs seek to address the determinants of health, the importance of AIDS and a balanced diet, and adequate nutrition is one of the basic issues to address.

4.5.2. Safe Water

In 1999, the officially declared national average of water coverage was high at 99.75% (NAC, 2000), but there was a wide disparity between provinces (See Table 10). In

Manicaland Province, (where Makoni District is situated) all households had access to at least one source of water, whilst 6% had more than one source available. Matebeland North, where Tsolotsho is situated, had 97% coverage, the fifth highest out of eight provinces.

Table 8. *Summary of household coverage of water and sanitation in the eight Provinces of Zimbabwe by December, 1999* (NAC, 2000).

Provinces of Zimbabwe	# h/holds per Province	# Protected Water Sources	# B/holes Down	# Repaired B/holes	Mean Downtime in days	# Blair latrine	% h/holds +safe water	% h/holds +Blair Latrine
Manicaland*	278,385	6,776	330	18	147	70,023	106	25
Mashonaland. C	207,020	7,476	0	-	-	38,642	66	19
Mashonaland. E	205,689	13,613	1,711	889	132	53,404	150	26
Mashonaland. W	210,800	8,111	1,264	1,169	135	54,357	89	26
Matebeland North*	173,214	4,325	0	0	58	18,511	97	11
Matebele South	196,469	4,722	400	704	162	32,051	133	23
Midlands	251,061	9,755	1,473	796	308	44,323	113	18
Total	1,689,431	61,705	5,745	4,294	133	361,498	99.75%	19.80%

*** Provinces where the intervention took place: Tsholotsho in Mat. North and Makoni in Manicaland.**

In 1999, the average downtime of handpumps out of order, nationally was estimated at 133 days. The same year the District Development Fund maintenance teams were disbanded to economise and most of the semi-voluntary handpump caretakers were laid off by 2000. The water point committees, which had initially been effective at village level in the mid 90's, are now hardly operating and it is estimated that over 65% of hand pumps are out of order with little repair (ZimAHEAD, 2005). In the past five years maintenance of boreholes has almost stopped and the community are without support to repair their boreholes. As clean, abundant water supply is one of the main determinants of health, programmes that enable women in particular to maintain their boreholes are needed. By 2002 it was estimated that water coverage in the communal areas had dropped to 74% coverage to within 5 km (WHO/Unicef, 2002).

4.5.3. Sanitation

The Ministry of Health in Zimbabwe uses the term 'latrine coverage' to indicate not just any traditional pit but only the 'Blair Latrine', an expensive Ventilated and Improved Latrine (VIP) model that is the recognised standard upheld by the Ministry of Health (See p.133, Section 6.5. Fig. 13). Blair or VIP Latrines have a lined pit, cement slab, brick walls, vent-pipe and permanent roof. This is a considerably higher standard than is used in most other countries in Africa where 'sanitation coverage' refers to all types of pit latrines, even if they are unlined, without a vent-pipe, slab or permanent superstructure (WHO/Unicef, 2000). According to these records, Manicaland has 25% sanitation coverage, whilst Matabeleland North has only 11%. The seemingly low level of latrine coverage of 20%, reported by the Ministry of Health does not take into

account the 'traditional pit latrines' that are in fact common in many rural areas, but are not reported by Ministry of Health, as they are not of the recognised standard. According to WHO/Unicef (2004) sanitation coverage in 2002 was 57%, but this may include all types of latrine, not only VIP/Blair model.

The household subsidy for sanitation is a controversial issue, which has a bearing on the levels of safe sanitation. In Zimbabwe, a three-bag subsidy of cement has been offered in sanitation programmes for families to build a VIP latrine and this was also offered the in Makoni intervention. Although it did initially help to raise the sanitation coverage from 26% in 1980, to 32% in 1997 (NAC, 2000) this subsidy was not sustainable in the long term, particularly when funding agencies withdrew, although despite lack of external support in recent years, there have been some isolated reports of CHC members building latrines (See Annex 13.2.6). This lends strength to the strategy of *'total sanitation of village by catalysed participation and self mobilization'* without any attempt to offer subsidy (Kar, 2003).

It has been estimated that to keep pace with population growth in Zimbabwe, it would be necessary to construct 80,000 latrines per annum, (Unicef, 1999). In reality, even at the height of latrine building in 1994/5, only 18,992 were built in the whole country in one year. By 1997/8 the number of latrines built per year had dropped to 8,083. This decrease was officially attributed to shortage of cement, and lack of Environmental Health Technicians in each ward (NAC, 2000).

4.5.4. Education and Literacy Levels

In the older generation (women over 45 years and of men over 60) 50% are illiterate indicating how few educational opportunities there were in colonial era. By 1990, of those who were still semi-literate in the country, 65% were women (Auret, 1990). Twenty years after Independence, literacy rose substantially to the present rate of 86% for males and 75% for females (Unicef, 1999). The subsequent high demand for adult literacy reflected an 'intellectual starvation' particularly among women, and the success of the adult literacy drive after Independence helped raise functional literacy.

The prior lack of school facilities at Independence created an initial explosion of enrolment in over-age children and adults. Many children's education had been disrupted by insecurity in the rural areas due to the liberation struggle. Zimbabwe could claim impressive achievements in education in the ten years immediately after Independence, but the pressures of ESAP and successive droughts (See Section 4.4.2.) combined to undermine gains made in the school system in the 1980's (Woelk, 2001). At present 85% of children in Zimbabwe attend primary school, with more girls

than boys until the fifth year when the ratio increasingly favours boys (Unicef, 1999). Although 93% of pupils reach Grade 7, (the final year in primary school) the standard of education is still poor despite massive investment in facilities and training teachers, Only 5% of children who enrol in primary school are likely to reach the fourth year of secondary school and sit 'O' level examinations. In the early 90's the drop-out rate of girls was 7% higher than for boys. Reasons given in a survey (Unicef, 1997) cite the cost as a main factor, with 40% of children kept from school because of non-tuition costs (building levy, sport fees, textbooks and uniforms). The lack of schooling for girls is relevant for this study because much of the appeal of the Health Clubs seems to be that it provides an opportunity for learning. It is also important in that is has been found that child survival can be improved by up to 20% if a mother has four to six years of schooling (Cleland and Van Ginnegin, 1989). The fact that girl children are often forced to leave school early may have made the prospect of a certificate in home-craft from attending health education sessions all the more appealing.

4.6. DISEASE PROFILE

The training in Community Heath Clubs aims to provide information for members on the main diseases that are known to affect the population in Zimbabwe. As background to this study the following section presents the top causes of hospital admissions for under five year old children (Unicef, 1999b) (See Table 9, below).

Table 9. Top causes of hospital admissions for children under five in Zimbabwe (Unicef, 1999)

Illness or condition	# Cases In 1999	% Total new cases
Acute Respiratory Infections (ARIs)	3,794,150	25.5
Malaria	1,715,131	11.5
Skin diseases	1,195,435	8.0
Ill-defined conditions	1,050,862	7.1
Diarrhoea	553,475	3.7
Eye diseases	466,485	3.1
Dental conditions	299,754	2.0
Bilharzia	221,493	1.5
Total	9,296,785	62.4

The most common ailments treated in hospitals in 1998 were acute respiratory diseases, skin diseases, diarrhoea, eye diseases, dental problems and shistosomiasis (Unicef, 1999b). Ill defined conditions may refer to HIV/AIDS symptoms as Zimbabwe avoided labelling people living with AIDS explicitly. The training sessions in the Community Health Clubs focus on all these conditions.

Ministry of Health statistics for water-related diseases from the Annual Review of the National Action Committee for the Water and Sanitation Sector in Zimbabwe (2000) are also presented to show the disease trend in Zimbabwe between 1994 and 1999 (See Table 12). This provides statistical information for Zimbabwe as a whole, at National level, although it should be noted that the two sets of information vary somewhat.

Table 10: *Disease Trends in Zimbabwe: 1994-1999 (MoH/NAC 2000)*

	1994	1995	1996	1997	1998	1999	Total	Average p.a.
Scabies (total population)	250,493	235,860	301,249	232,648	128,738	86,118	**1,235,106**	205,851
Scabies in under 5's	89,854	116,169	108,547	85,768	48,057	32,560	**480,955**	80,159
Eye Diseases (total pop)	329,389	436,000	464,659	399,710	405,806	386,258	**2,421,822**	403,637
Eye diseases (under 5's)	78,308	115,942	130,593	96,710	99,875	92,262	**613,690**	102,281
Bilharzia (total pop)	194,575	248,800	217,966	201,582	190,746	129,782	**1,183,451**	197,241
Bilharzia in under 5's	6,891	7,249	6,750	5,345	5,301	3,9653,	**30,156**	5,026
Diarrhoea (total pop)	**541,591**	**586,138**	**553,477**	**530,727**	**530,419**	**497,916**	**2,709,541**	451,590
Diarrhoea in under 5's	**208,834**	**234,353**	**234,816**	**218,627**	**216,771**	**201,927**	**1,315,325**	219,220
Dysentery (total pop)	156,403	157,655	139,128	120,123	112,075	93,966	**779,350**	129,891
Dysentery in under 5's	35,53	36,148	31,592	27,551	25,257	20,783	**141,331**	23,555

4.6.1. Acute Respiratory Infections

Two in every three children have an ARI episode every year with rural children more at risk than urban. The number of children dying is not known as many cases are not reported and many are victims of late treatment or an absence of antibiotics.

4.6.2. Malaria

Whilst previously Malaria was endemic to the low lying areas of the country it has been spreading each year further afield and now is found all over Zimbabwe. In 1994, sixteen out of 57 districts reported a prevalence of more than 100 cases per 1000 people (Unicef, 1999). By 2005, 3 million people were estimated to have had to least one episode of malaria in the past year. Whilst Insecticide Treated Nets (ITN's) or even untreated bed nets are the most appropriate preventative measure, few amongst the rural population can afford them and when nets are donated they are often used only by the adults. ITN coverage was only at 7% (Unicef, 2005). Children under five and pregnant women are particularly at risk if not treated upon onset of infection of Malaria. Deaths tend to result more from delayed referrals rather than resistance to, or lack of drugs (Unicef, 1999). Highest incidence occurs during the rains from November through to April with more cases reported in the wetter years (Unicef, 1999).

4.6.3. Skin Disease

Sufficient *quantities* of water, rather than the *quality* of water, has been found to have significant affect on the prevalence of skin diseases such as scabies and ringworm (Feachem,1984). In Zimbabwe, the third highest complaint reported by Ministry of Health is skin disease with 1,195,435 cases of which 8.0% were new cases in 1998. Scabies is an indicator of lack of adequate water for regular washing and lack of personal hygiene in the home. Statistics reported in the period between 1994 and 1999 show a general decline in scabies from 250,493 cases for all ages in 1994, to 86,118 in 1999.

4.6.4. Eye Diseases

Unlike other diseases at national level the incidence of reported eye diseases were gradually increasing during the period 1994 to 1999, from 329,389 up to 386,258 (NAC/MoH, 2000). Eye disease can be reduced by regular face washing, and in the case of trachoma, which is transmitted mainly by flies that breed in scattered human faeces, sanitation appears to be the key intervention to reduce fly populations (Emerson et al., 1999). To understand the trend in eye diseases more fully, the data needs to be disaggregated into types of eye disease, and areas most affected.

4.6.5. Diarrhoea and dysentery

In 1997, there were 553,475 cases throughout Zimbabwe (population 11.6 million) of diarrhoea, of which 3.7% were new cases. Diarrhoea incidence is linked to the seasonal rains starting in November and remaining elevated for about three months (Unicef, 1999b). It is strongly associated with poor living conditions, lack of safe water, open defecation, fly breeding and poor home hygiene (Feachem, 1984), all of which can be found to some degree particularly in the rural areas of Zimbabwe (Auret, 1990). It is also associated with malaria and HIV/AIDS. In Zimbabwe, diarrhoea trends show a slow decrease from a peak in 1995 of 270,000 to 222,710 reported cases in 1999 (NAC/MoH, 2000) (See Table 10 above).

4.6.6. Bilharzia (Shistosomiasis)

Shistosomiasis, the parasitic infestation of the liver or the colon by flukes, is known in Zimbabwe as bilharzia. Throughout Zimbabwe it is estimated by the Ministry of Health that bilharzia has been steadily decreasing from 217,966 cases in 1996 to 129,782 cases in 2001 (MoH/NAC, 2000).

4.6.7. HIV/AIDS

Zimbabwe has been slow to acknowledge the immensity of the HIV/AIDS pandemic. From 1980 to 1990, HIV/AIDS increased from 10% of the sexually active population in Zimbabwe, in mid 1980, to 25% in 1990; ten years of progress in health sector in the 1980s was almost completely reversed by the end of the 1990's (Unicef, 1990). By the year 2000, the rate of infection had risen to 33% of the population, and one in every three children born at that time were not likely to reach their 30th birthday. In 2004, the estimated HIV infection rate was thought to have dropped to 24.6 percent with about 1.8 million people currently living with the disease (Unicef, 1999). This still gives Zimbabwe one of the highest AIDS prevalence rates in the world (Unicef, 2005). By the year 2000, there were an estimated 600,000 orphans in the country, and by 2004 there were 800,000 (NACP, 1998).

Women are at more risk of infection than men and tend to contract HIV earlier due to marriage and sex at a young age. Often this is with older men who often seek virgins in the belief that this will protect them from infection. Sexual abuse, including incest is a major concern (Tichagwa, 1998). Those with migrant husbands working in town are at high risk from 'second wives' in the town. Resistance by opinion leaders such as village elders and church leaders to the use of condoms, has further undermined efforts to protect disempowered women from infection (Jackson, 1992). The combined effects of HIV/AIDS, unemployment and poverty are compromising the status of children in Zimbabwe. It was projected that 910,000 children will have been orphaned by 2005 (Woelk, 2001), and there are now over 12,000 street children countrywide (Unicef, 2000).

Background to the extent of the HIV/AIDS pandemic in Makoni District was estimated by a survey done at community level in ten wards. Each Community Health Club identified and registered all those within the village who had been diagnosed with HIV/AIDS. It was found that there were 376 bed bound, 555 housebound and 2,12, mobile, making a total of 3,052 infected. Those affected by HIV/AIDS were 1,663 orphans with no surviving parent, and 3,599 with one parent alive. In addition there were 2,354 widows and 436 widowers making a total of 8,052 people affected. This makes a total of 10,916 people infected or affected by HIV/AIDS in Community Health Club areas in Makoni District and those infected are estimated between 7.2% to 3.1% dependent on size of population in each ward (See Annex 4.). This is considerably lower than the estimate nationally of 25% infected, and probably reflects the limited reach of each Health Club.

4.7. THE HOMECRAFT MOVEMENT

As background to the intervention this section revisits the historical development of women's groups from Colonial times to the present Community Health Club intervention.

4.7.1. Commodification of the African market

The desire for change in the selfhood of indigenous peoples and fascination for new commodities provided a ready market for merchandise in colonial Rhodesia. Opportunistic companies were quick to promote cleanliness and smartness in order to sell soap and body products to the African market. Social acceptance based on bodily hygiene was a major part of ethnographic typology (Burke, 1996). Missions were the primary source of upward mobility and taught domesticity, alongside religion, in order to 'civilise' local people (Summers, 1964).

4.7.2. Ideals of domesticity

The use of cleanliness as a measure of a person's relative cultural elevation and character may be one of the catalysts for change that produced the demand for domestic training in women's groups of colonial Rhodesia. Women, in an effort to elevate themselves by accepting new ideals of domesticity and appearance may have traded the control of their own fathers and spouses for that of the missionary moral code that so often focused on the personal appearance and habits of school pupils (Schmidt, 1992).

In addition the teachings of Christian missionaries tended to place 'Cleanliness, next to Godliness' and although this often prompted *'colonial debates over what forms of knowledge were appropriate to the 'native mind'* (Burke, 1996) it bred a generation of progressives who wanted to embrace all that a western lifestyle could offer, whilst being relegated to second class citizens in a racially divided nation. The 'born frees'[5] may have had little contact with white missionaries and less opportunity for cross cultural observation. Few colonised countries in Africa have accepted the values of the colonizer to the extent that Zimbabwe has, and despite radical nationalist rhetoric at government level, the country remains relatively conservative, with an upwardly mobile professional and commercial black elite, aspiring to middle-class Christian values, whose children are often educated at pseudo-English private schools. In the countryside much of the popularity of the health promotion as conducted through Health Clubs may have roots in early missionary efforts and colonial philanthropic

[5] Those born after Independence in 1980

efforts which were institutionalised after Independence into government programmes, with health personnel such as the Environmental Health Technicians or agricultural extension officers providing the facilitating role.

4.7.3. Philanthropic efforts of Colonial Settlers

Two early initiatives which reflected humanitarian efforts to upgrade hygiene in rural homes are notable: The Jeanne's movement, in 1929 in Bulawayo and near Harare, and the Hasfa Homecraft Village near Rusape, which was set up in 1942.

4.7.3.1.The Jeannes Movement

The Jeanne's Movement which originated in America, was an attempt by the Phelps-Stokes Commission, to provide a more practical education for blacks (Burke, 1996).

> *By Jeanism is meant the bringing of learning and the disseminating of knowledge of Western culture to the villages... and the essence of it was the link between the school and the community* (Gelfand, 1976).

In 1929, a Jeanne's Community was established near Bulawayo for women, and for men at the Domboshawa Training Centre[6] near Harare. For ten years, 'home demonstrators' returned to their villages to upgrade local village conditions with their skills in sewing and cookery as well as all aspects of child care, hygiene, maternity and first aid (Rasmussen & Rubert, 1990). The earliest social woman's group was at the Wesleyan Methodist Church in Old Umtali Mission.[7] Its rationale stated that

> *Girls should be trained in every phase of home and community life – food, care of clothing, cleanliness, gardening and recreation rather than be given a plain education which might cause the young sophisticated Africans to lose respect for their traditional elders (Gelfand, 1976).*

[6] This subsequently became one of the main training schools for Environmental Health Technicians
[7] in Manicaland Province, less than 50 kms from the area of intervention in Makoni District

4.7.3.2. The Hasfa Homecraft Village

The Hasfa Homecraft Movement also started in Manicaland Province, at St Faiths Mission in Rusape[8] where two missionary women opened a private school for women to come with their children, or for girls to prepare for marriage, training them to become:

> *'...true homemakers and be able to cope with and improve living conditions in the reserves[9] ... to build homes in which love and health could be found (Gelfand, 1976).*

Between 1943 and 1960, the Trust had an intake of around 20 women every year trained to spread hygiene practices in the villages and assist local communities to cope with the demands of the modernity which was undermining their traditional world.

By the 1940s, the more progressive white women in the community were engaging philanthropically with black women, starting a variety of groups for sewing and hygiene, although this challenged the general colonial discourse. The rapid spread of women's groups demonstrated their relevance to the lives of rural women and they became a popular means through which women could come together for collective social and political action. Thirty years later it was estimated that 10% of the female population of Zimbabwe belonged to 'homecraft clubs' that had been started by the Federation of African Womens' Clubs.

> *The stereotypical images that the Jeanne's women and their superiors tried to create around the institution of home demonstration formed the basis for one of the most enduring archetypes of female personality in most Zimbabwean communities from the 1950's to the present day: the 'respectable, club going, Christian wife'* (Burke, 1996).

Although homecraft clubs were initially formed to transfer European notions of domesticity and stem the 'backwardness' of rural women, they played a major role in developing the gender consciousness that rural women eventually expressed during the liberation war from 1972 to Independence in 1980.

> *These (women's groups) constituted a support group that offered urban women a replacement for the kind of mutual aid that village women could count on in times of crisis* (Rasmussen & Rubert, 1990).

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[8] Makoni District's Administrative Centre, where the NGO implementing Community Health Clubs is now based
[9] Rural communal areas reserved for blacks, sometimes known as Tribal Trust Lands (TTL)

With the establishment of the Ministry of Community, Co-operative Development and Women's Affairs, Womens' Groups and co-operatives mushroomed in the early years of Independence and there were over 571 registered co-operatives by 1984, and 6,000 unregistered co-operatives, with a total number of around 170,000 women involved throughout the country.

4.8. THE PROMOTION OF HEALTH AND HYGIENE

4.8.1. A study on effective Health Education

In the 1980's health education in Zimbabwe tended to be 'top down' lectures by Environmental Health Technicians, often tacked on as an afterthought to Water and Sanitation programmes, or alternatively authoritarian directives at clinics whilst women awaited antenatal checkups. Mooney (1975) in a study undertaken in Makoni District with Environmental Health Technicians (EHT's) identified the following as critical factors to improve the current approach to health education: felt needs, education (defined as 'helping people to see their needs'), providing a physical example of the technology or a concrete demonstration, estimating how much outside help is needed, and the choice of a suitable time of the year. He also noted the cultural importance of providing communal refreshment at gatherings and a ceremony upon completion of the project. On the constraints that could derail a public health programme, lack of health education was noted by 36% of the Environmental Health Technicians in the survey, shortage of money by 21%, lack of co-operation by 14%, use of force by 12%, opposition from the community by 12%. Lack of planning and 'influentials' not getting involved accounted for 7%, whilst only 4% mentioned political opposition, traditional beliefs and suspicion. Interference by a community advisor, religious beliefs, and lack of time, training materials, manpower and follow-up were all mentioned by only 2%. Many of these lessons were new at that time and only became common practice in the early 1990's when more participatory approaches became known.

4.8.2. Health Promotion and the use of PHAST : 1991 – 2003

Participatory Health and Sanitation Transformation (PHAST) was one of a host of similar participatory methodologies, which became the vogue in development worldwide in the 1990's. PRA (Participatory Rural Appraisal) was a training system used to elicit information from the participants so that they could analyse their own felt needs, so avoiding the 'top-down' foisting of project targets upon largely passive beneficiaries (Chambers, 1983). PHAST uses a similar training technique to Participatory Rural Appraisal (PRA) (Chambers, 1983) but focuses on health promotion which was

specifically related to water and sanitation (Narayan & Srinavasan, 1994; Narayan, 1993, Srinavasan 1990).

PHAST was formally introduced into Zimbabwe in 1994 as part of a regional pilot project, when the first Training of Trainers Workshop was held. Prior to this WSP-World Bank initiative, participatory Health and Hygiene Education (HHE) training materials (consisting of a tool-kit of illustrated cards for different topics) had been developed by the writer and extensively pre-tested with the Domboshawa Training Centre (funded by WHO). By 1999, the Ministry of Health had trained most of the Environmental Health staff of the 57 Districts in Zimbabwe, and "Tool Kits" , of illustrated cards on 15 health and hygiene topics, were distributed to over 800 EHT's stationed throughout the country. In four years, an excess of US$2 million was spent on funding Participatory Health Education (PHE) in Zimbabwe (WSP,1999). A total of 9,232 people were trained and this density as well as the wide spread of the training across the whole country, should have resulted in improved health within the rural areas. However despite this input, there was little to show amongst the community as a result of the training of EHTs.

The Community Health Club Intervention was planned simultaneously, based on PHAST principles, but because the health sessions were put into a more structured programme of sessions, with a specific content and measurable outcomes, the intervention was more able than conventional PHAST programmes, to measure the rates of uptake and hygiene behaviour change by the community.

Chapter 5. The Community Health Club Model

SUMMARY

This chapter moves from the current situation in Zimbabwe and outlines a Model of development to improve family health in rural areas through Community Health Clubs.

Section 5.1. examines how the cyclical world can be modified to a linear world view using the strengths of consensus to sustain change.

Section 5.2. provides an analogy to explain two survival strategies and the levelling mechanisms of peasant society than may inhibit individual initiative

Section 5.3. defines a functional community, looking at how to overcome some common psycho-social blockages to development by building Social Capital.

Section 5.4. is the core of this thesis, explaining the concept of the Community Health Club Model, what makes a Community Health Club member and objectives of a club.

Section 5.5. gives a detailed account of Stage 1: health promotion as an entry point, the method of training used, and what incentive there is to join

Section 5.6. explains the type of water and sanitation intervention which takes place in Stage 2. Implementation

Section 5.7. describes Stage.3, when Health Clubs divide into smaller income generating groups to providing a means to alleviate poverty which is one of the main determinants of poor health.

Section 5.8. explains the rational behind Stage 4 when social development initiatives such as care for vulnerable families and people living with AIDS, is a viable initiative as Health Clubs have consolidated successes of achievement having addressed many of their basic health problems.

Section 5.9 provides the rational for the four stage approach and summarises the main characteristics of this model

Section 5.10 revisits Nutbeam's (1999) criteria for a viable model of health promotion

5.1. THE MECHANISM OF BEHAVIOUR CHANGE

5.1.1. Conflicting Worldviews

The dominant 'liberal' tradition of Western politics characterises the challenge of modernisation as being the completion of a progressive process that began in colonial times that modern independent nations are still struggling to achieve (Keesing, 1981). Resistance to change is characterised by:

> *'Traditional modes of social organisation, values, and customs which are by their nature conservative, and retard social change - which requires individual initiative, risk-taking, innovation, and freedom from constraints of kinship or customary obligation (Keesing, 1981).'*

The Community Health Club (CHC) Model whilst clearly trying to pursue a path towards changing some aspects of 'traditional' society differs from other modernising theories in the recognition that the same psycho-social forces of conservatism and consensus that are clearly successful in *blocking* development can be turned around to be a force to *promote* development.

It is further suggested that reasons for non co-operation, which have in the past been attributed to negative attributes of peasant culture, are more likely to be due to the fact that modernisation has been routinely promoted as an individual, progressive, activity rather than a survival strategy of the group. The CHC Approach identifies that it is this appeal to the *individual* to change in isolation from the *group* that often blocks change. Western notions often employ an ethnocentric approach failing to use the strengths of 'traditional' society. In industrial society the valuable mechanisms of consensus and conformity have to a large extent already been undermined by the nuclear family.

The words 'traditional' and 'modernising' have become value laden, in as far as the label traditional has been often associated with *'any characteristic of the underdeveloped world which has been an obstacle to development, whilst modernising represents everything enlightened and successful'* (Rhodes, 1970). Therefore the purely functional terms *cyclical* and *linear* will be used to describe the two perspectives that represent two *modus vivendi*, neither of which are considered negatively.

Subsistence farmers have a living pattern that is dependent on the seasons and tied to the demands of agriculture. It is surmised that the annual cycle of planting and reaping crops conditions the peasant outlook and to encapsulate this idea, their perspective is here referred to as a *cyclical world-view*. By this is meant they expect life to follow the

same pattern as the previous generation with minimal change. Children are socialised to sharing similar values to those of the parents and grandparents, and behaving according to cultural norms (Keesing, 1981).

Modern industrial society is based on technological progress, and thus the world-view is one of adaptation to change. Agricultural seasons are largely irrelevant to the people of the industrial world, as the climate does not condition the behaviour of urban dwellers to the same extent. A person expects to improve either their talents or their prospects progressively from year to year and change is anticipated. This outlook is here referred to as a *linear* worldview, a mindset that looks to the future, with very little reference to the past.

In societies the transition between agricultural and industrial livelihoods, tend to pull people in conflicting directions and this often creates a vacuum between a cyclical and linear worldview, referred to as a state of anomie (lack of norms). In a state of anomie, society becomes unstable and often dysfunctional, until new norms take over to direct behaviour (Merton, 1957).

> *The importance of common interest associations in areas of rapid social change is considerable. Increasingly such organisations assume the roles and functions formally held by kinship or age groups; in many areas they hold the key both to individual adaptation to new circumstances and to group survival.'* (Haviland, 1993)

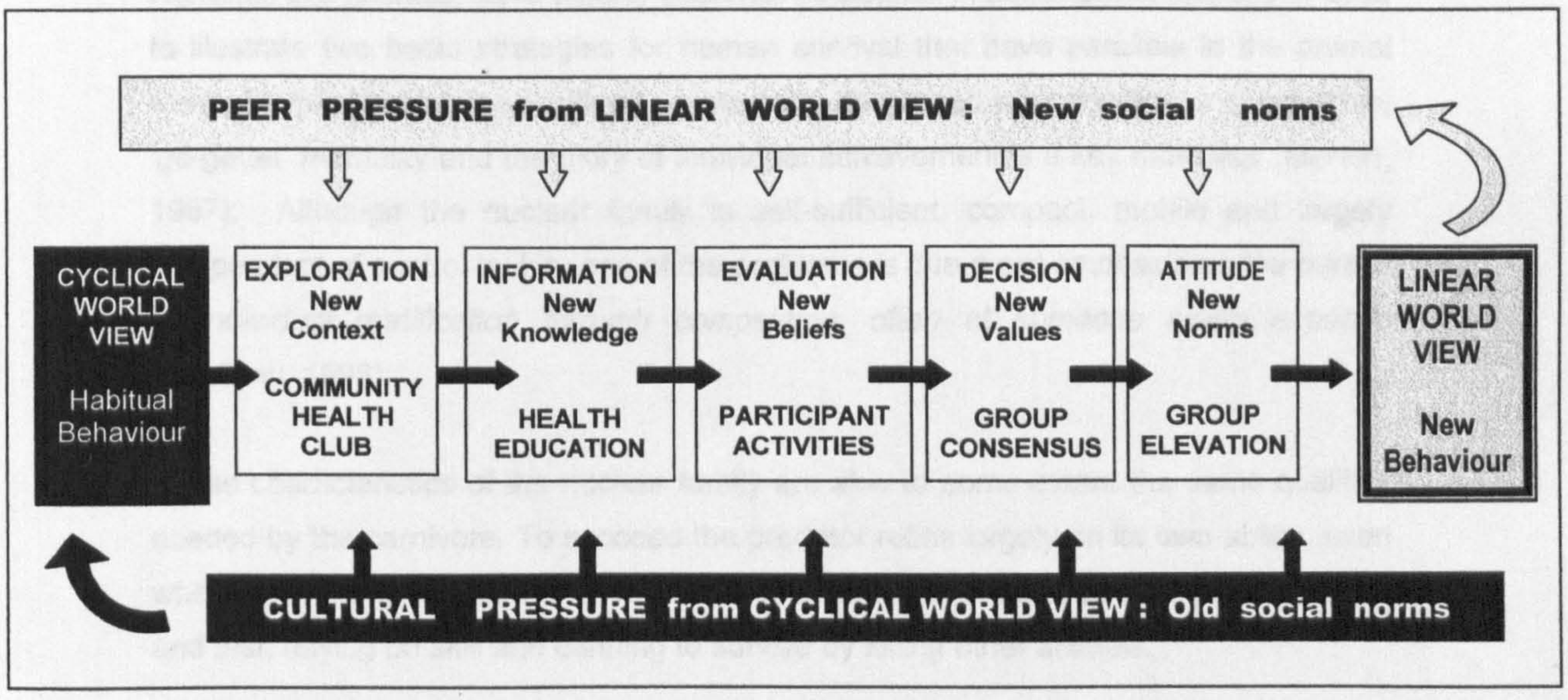
5.1.2. Cyclical-Linear Model

This model tries to provide a simplification of the group dynamics that occur when a Community Health Club is introduced into an area. In an effort to distil these many threads of social and cultural determinants into a simple model, we have tried to envisage the *process* of change as a broad shift of the target population between two opposing world-views. Whilst many models of behaviour change provide an explanation of cognitive processes that produce change, there is a general lack of literature on how to change habits. Habitual behaviour has been formed initially by the socialisation of the child with traditional norms and values of the cyclical worldview, and these have become ingrained into adult behaviour with daily repetition. However, many of these habitual actions in terms of hygiene, are inappropriate and may damage the individual.

Health promotion theories such as the Health Belief Model and Social Planning (Stretcher & Rostock, 1997), assume if knowledge is given, people will automatically

change their ways for the sake of their own survival. However it now appears that knowledge does not necessarily result in action. In fully literate societies we find that smokers know full well that their habit can result in lung cancer, but still make no effort to preserve their life. The same lack of response is seen in rural 'communities' who continually ignore recommendations to use latrines. As models such as the Reasoned Action and Planned Behaviour (Ajzen & Fishein,1980) individual behaviour is determined by personal belief and perceived personal control, reinforced by the subjective norm (the opinions of significant others). This is not dissimilar to the Model of Cyclical-Linear change, although the latter places much more emphasis on the importance of the subjective norm (peer pressure) to change individual behaviour in the context of a manufactured group. Personal belief and self-efficacy are carefully manufactured within the Health Club, and reinforced because everyone ascribes to the same thing at the same time, so the group elevates itself together. Personal doubt is overcome because of the group belief; personal control is credible because others achieve it.

Fig. 4: *Cyclical-Linear Model of changing Habitual Behaviour*



5.1.3. Explanation of the Model

A Community Health Club provides a *new context* to explore *new knowledge* through Health Education. By using participatory activities members engage with *new ideas* through a process of debate and self-discovery rather than through the transfer of expert advice. If key messages are inculcated this may give rise to *new beliefs*. By working together to solve local problems a level of group consensus is achieved which helps individuals subscribe to new beliefs without fear of social censor. Consensus within the group manufactures acceptable *new values*, which are deemed

by the group to be more appropriate to meet the new situation. As each week brings new issues to the notice of the members, a raft of beliefs and values is built up which by the end of six months has become an integrated set of *norms* promoting a 'culture of health'. The critical mass is important in this model as there is continual pressure from the Cyclical Worldview to remain within existing practice. However if enough 'converts' are practising new behaviour and ascribing to new values the pressure to convert will intensify.

A 'converted' Community Health Club member can be predicted to behave in a way appropriate for a Health Club member. As behaviour change is based on *changed values* and reinforced by *cultural consensus* it is likely to be sustainable as it is not a superficial individual action but part of a larger culture of health.

5.2. RESISTANCE TO CHANGE

5.2.1. Carnivores and Herbivores

Humans, like animals, have different survival strategies. A behaviourist analogy is used to illustrate two basic strategies for human survival that have parallels in the animal world. In industrial society, cultural norms have developed to encourage a competitive, 'go-getter' mentality and the glory of individual achievement is a key motivator (Merton, 1957). Although the nuclear family is self-sufficient, compact, mobile and largely independent of control by kin, one of the problems is *'the great emphasis on the pursuit of individual gratification through competition, often at someone else's expense* (Haviland, 1993).

These characteristics of the nuclear family are also to some extent the same qualities needed by the carnivore. To succeed the predator relies largely on its own ability, even when temporarily co-ordinating with others to hunt. They must be self-reliant, mobile and fast, relying on skill and cunning to survive by killing other animals.

By contrast the survival strategy of the herbivore is to co-exist in large herds without competing for food. The threat is usually external and animals breed in sufficient quantity to enable the herd to survive, sacrificing individuals for the survival of the whole. The strategy for the survival of the species is 'safety in numbers', rather than individual strength or cunning. In human terms we find the same 'herbivore' strategy echoed in the 'cyclical' worldview.

In an idealised subsistence society an individual is largely protected within the clan, by prescribed group decisions, and by the ascribed authority of the village elder, who

seeks to maintain strong group identity through cultural cohesion. As long as he conforms to its norms, the ordinary member has a safety net: his extended family. Individual strength is discouraged as it undermines the group. This is evident in the values most treasured in Zimbabwe:

> *The Shona constitute a great brotherhood in which sharing the essentials of life with others is a basic requirement. At mealtimes people eat from a common plate. Greed is frowned upon and no man eats on his own.'* (Gelfand, 1985)

5.2.2. Insignificance of the Individual

Health Promotion seeks to change people's hygiene behaviour. In the Industrialised World, personal change is usually an individual act. Whilst it is acknowledged that in the developing world this is also often the case, in an *idealised* cyclical society, most activities would be in the context of the whole group. An individual action would affect more than the individual concerned, it challenges the 'traditional' way of life (Keesing, 1981) and this is still often the case in some rural communities. The (herbivore) perspective is that an individual life is less important that the survival of a family as a whole. As the extended family survives in the afterlife, the supernatural continuum of existence reduces the importance of an individual's life on earth (Ncubane, 1977). The individual is perceived as less important than harmony of the whole: personal freedom is not encouraged as it may divide society. Change breeds inequality and it is safer to be the same as others because it avoids jealousy. Envy often results in conflict, which can destroy the society as a whole.

> *A child is taught to avoid doing anything bad lest he is likened to a witch or attracts the attention of one. He must not boast, lest he provoke a jealous person who may harm him. Humility is considered one of the greatest virtues of man and is practised by the Shona to a very high degree (Gelfand, 1985).*

Programmes based on the Health Belief Model have made their appeal for change to each individual. By implication this is asking him to be better than his peers, and from the beneficiaries perspective this could start a chain of jealousy. The Community Health Club intervention, uses the opposite tactic. If a decision is taken by the leader or endorsed as a group, then the individual within the group can make the change, and need have no personal fear. Group consensus is achieved and the individual members feel they must conform. Julius Nyerere, the first president of Tanzania, aptly summed up how decisions are taken in a well-known quip regarding political debate:

'In Africa we sit under a tree, 'til we agree.'

5.2.3. The double-bind of women in Zimbabwe

Women have a double sense of unease when faced with change: conformity to culture impedes them, as well as traditional reliance on men for decision-making. Women seldom make major decisions and are accustomed to the passive role of minor if their husbands are at home. Despite the fact they are now often left to manage the family affairs most of the year alone, they are still socialised to be unassertive and housebound. In cyclical society, a woman has no personal power, and her attitudes and beliefs are largely dictated by conventional wisdom. A woman on her own cannot withstand social pressure in a society that protects its homogeneity by discouraging difference, and she is therefore reticent to make changes. However women in a group can support each other, often protecting each other, and are a powerful lobby for change particularly if led by elderly midwives. The elders of the village ensure the conformity, particularly of women's behaviour, to cultural mores and use the threat of 'ancestor wrath' to ensure social control. Thus they are often fearful, not only of their husband's anger and often physical abuse if they act without permission, but also the condemnation of the village elders.

5.2.4. Limited Good and Levelling Mechanisms

Within an extended family a person can expect to be assisted by his relations, and he has every right to claim their support. Cultural values have a natural levelling mechanism in that every individual has a duty towards the whole extended family. If an individual earns enough to advance his own family beyond average living standards, his extended family often claim any surplus for their own basic needs. A very real fear of ancestral wrath, witchcraft, and social disapproval combine to ensure that redistribution of wealth takes place (Gelfand, 1986).

Foster (1965) sees the peasant world views as characterised by the image of limited good:

'all the desired things in life such as land, wealth, health, friendship and love, manliness and honour, respect and status, power and influence, security and safety, exist in finite quantity and are always in short supply.' From this would seem to follow the emphasis many have noted in peasant societies: families competing independently against one another, with each seeking to conceal its advances and to guard against loss of relative position to others; competition for friendship and

*love, within families and outside them; preoccupation with health and illness; and an emphasis on manliness and honour. (*Keesing, 1981).

If everyone in a village remains at the same standard of living and does not 'rise above their station' benign relations will be achievable with their neighbours. In a threatened culture, with limited access to material gain, it appears (See Section 9.1.3.3) that jealousy and vindictive behaviour are often the knee-jerk reactions to those who prosper. The 'Pull Him/her Down' (PhD) syndrome (as it is called locally) is an indicator of a powerful drive for equity within a culture succumbing to modern pressures.

In recognition of this levelling mechanism, health promotion is undertaken for the first six months without any material subsidies that could provoke competitiveness for the limited good being distributed. This strategy has been purposely upheld as a key tenant of the Community Health Club model to ensure that the group becomes united before introducing any divisive distractions. Only when the club is clear about its priorities are the goods such as sanitation subsidies and income generating technologies introduced, and this only to those who have earned it fairly by full attendance of the health sessions.

5.3. DEVELOPING COMMON UNITY

The Community Health Club Model was crafted specifically for developing countries, particularly in Africa. By identifying the cultural strengths of the rural way of life, the Community Health Club Approach uses traditional values of conformity and group cohesion as a positive drive for self achievement, so employing psycho-sociological constructs to engineer behaviour change. It is assumed, in this theory, that 'Communities' are not fully functional at the outset of the intervention, and the building of 'common unity' is a calculated means of 'mending' communities to enable them to effectively control preventable diseases.

5.3.1. A Functional Community

The objective of the CHC Model is to develop a competent community that can provide support for its citizens and nourish human needs. This is effected by a process of development that progressively addresses the determinants of health, and may take up to four years to ensure sustainable improved health.

A community can be defined simply as:

> *... a number of people who share a distinct location, belief, interest, activity or other characteristic that clearly identified their commonality and differentiates them from those not sharing it* (Hoffman, 1994).

The word 'community' has been called the *'aerosol word of the 1970's because of the hopeful way it is sprayed over deteriorating institutions.'* (Jones, 1977). In most situations it simply refers to 'the people'. By dissecting the word into 'common-unity', its root meaning is regained. A 'community' often wrongly suggests a cohesive society when it is, in fact, just a group of families with little real common unity *(See 5.12.1).*

> *A good community has opportunities for rewarding social relationships as well as for sustenance, employment, housing, education, health and social services and for individual participation in community decision-making. It provides for social control, conflict management and desirable living conditions for all citizens. Most especially it provides care for those who cannot care for themselves.* (Fellin, 1989)

Whilst the idealised subsistence society functions through the control of village elders who ensure cultural cohesion, rural societies in most developing countries are in a state of transition to a westernised mindset (Keesing, 1981). Traditional midwives, are often uninformed on many new issues such as contraception, and cannot adequately advise a younger generation seeking to make a transition to a modern lifestyle. By updating influential women with health knowledge useful for modern issues (such as HIV/AIDS), they become once again an important resource person for the community, an auntie *(vatete)* to be consulted on personal matters.

The first objective of the Community Health Club approach is to rebuild a *common unity of purpose* through group consensus, a cultural mechanism that in the past bonded traditional society. Common unity is achieved by ensuring that everyone shares the same knowledge and understanding of local problems. To achieve consensus a consistent group is needed, so that knowledge once acquired can be reinforced with often repeated key messages. Reinforcement is bound to be more effective if the same people come every week, hence the rationale of getting people to subscribe to a club and a pre-arranged agenda. A club that meets regularly is very different from a 'gathering', made up of random assortment of people assembled indiscriminately. If a

Table 11: *Common psycho-social blockages to development*

- **Levelling Mechanism (Haviland, 1993)** A societal obligation compelling a family to distribute goods so that no one accumulates more wealth than anyone else Local field workers refer to this as the PhD Syndrome (Pull her Down Syndrome).

- **Limited Good Syndrome (Foster, 1965, 1972)** : Individuals compete for personal gain when material subsidies are distributed and this undermines group cohesion.

- **Lack of Self-efficacy (Bandura, 1977)**: Those who lack self confidence are afraid to make individual decisions which may not be approved by husband / elders.

- **Big Man Syndrome (Havlland, 1993)**: If existing structures are used for the new intervention there is every likelihood that traditional leaders may highjack benefits for their own families whilst distancing planners from the poorest of the poor, who have little voice to object.

- **Wait and See Syndrome**: If the intervention is risky there is little margin for error and therefore conservatism is the safest option.

- **PhD Syndrome**: The Pull him/her down Syndrome (local expression) is a jealous reaction to the success of improvement of family or community members who try to change, or 'rise above their station'. Detractors seek to undermine their attempts by ridicule or active aggression.

- **Undemocratic Leadership**: Project managers have personally selected local leaders on the basis of their high visibility rather than by democratic vote.

- **Lack of Organisation**: No designated group has been given the mandate to institute new reforms.

- **Factionalism**: beneficiaries are divided between themselves and there are no mechanisms for overcoming dissent, therefore the programme is abandoned.

gathering is called again it is unlikely that that the same people will attend, therefore each time the same basic information has to be repeated and progress between 'gatherings' cannot be made. By contrast a 'club' attracts the same membership each week enabling the entire programme of issues to be covered systematically. The club will obviously be more appropriate if it focuses on local problems which are also soluble by local people. Knowledge can be shared and multiplied, and for this reason it unites rather than divides.

The 'common unity of purpose' evident in Community Health Clubs was first coined by a fieldworker in 1997 who reported the following:

It has been seen all over Nyamidzi ward, where the Health Clubs have been that the members have a common unity of purpose: they have become a real common-unity, and we can see them changing their ways for the better (Nurse-in-charge, Nyamidzi Clinic, 1995).

5.3.2. Knowledge Sharing

As discussed in Chapter 4, women in Zimbabwe had less access to schooling in colonial times prior to 1980, and yet once literacy classes became available after Independence there was a rapid uptake, indicating a strong desire by women to learn (Auret, 1990). Although 75% of women are now literate (Unicef, 1999) it was surmised that girls have few opportunities for intellectual activity in the rural areas, as after leaving school they tend to marry young and be immediately immersed in child rearing. The Community Health Clubs provide a regular weekly forum for learning and debate on topics that are designed to interest women, and like literacy classes have been well supported by women. For two hours every week, men and women can meet on a social basis to exchange news, expand their minds and provide solidarity for each other.

5.3.3. Need to Socialise

There are few opportunities to socialise in the rural areas, and women who find excuses to visit each other are considered idle. Women's Groups have always attracted support and Church groups are mushrooming in recent years. Although there are weekly funerals due to many AIDS related deaths, there are few purely social outlets for women. It was surmised that a common interest for women would be in family health and hygiene, and that this had been popular in the past whenever home-craft clubs had been started (See Section 4.6.3.2). Singing and dancing have always been an outlet for bonding in Shona and Ndebele culture (Kriel, 1971) and the Community Health Clubs provide another opportunity to socialise.

5.3.4. The Need to Achieve

The idea of structuring knowledge into achievable components is modelled after the Scout Movement that encourage children to learn skills in stages. Like the Scout Card, the Membership Card in Community Health Clubs allows members to complete a card of achievements, with the prestige of graduation when all tasks are completed. This technique of quantifiable achievement was purposefully designed as a strategy to achieve high levels of attendance. It is an assumption that the Need to Achieve, as identified by McClelland (1967) is as active in cyclical societies as it is in linear societies but that the opportunity for self improvement does not exist to the same extent.

5.3.5. Building Social Capital

The sharing of information and building of solidarity develops social cohesion and a safety network is put in place to supplement the erosion of traditional support systems that are disappearing in the confusion of old and new. When anomie is replaced by a new set of values, levels of social cohesion are strengthened, networks are firmly established and as a result the general level of Social Capital in an area increases. This concept refers to the level of trust and reciprocity in a given area from which all can benefit, whether they have contributed to it or not (Kawachi & Berman, 2000). For example, if Community Health Clubs are active, health in the area may increase, and this will benefit not only the members of the Health Clubs but all members of that society. Where there are high levels of Social Capital we find true communities, identifiable by their sense of common unity.

Supportive networks are important sources of positive self-concept and help to shape one's wordview (Miller & Turnbull, 1986) providing a buffer to protect individuals. According to Auslander and Levin (1987) social networks provide four main types of support:

- Instrumental (provision of goods and services)
- Emotional (nurturance, empathy and encouragement)
- Appraisal (information relevant for self evaluation)
- Informational (advice and feedback)

Community Health Clubs should be able to provide all four means of support.

5.4. THE COMMUNITY HEALTH CLUB CONCEPT

5.4.1. What is Community Health?

The determinants of health lie not only with provision of proper health care by government, as was demonstrated in the previous chapter, but also with the 'community', and more particularly the family itself. Because public health is a common issue, safe living conditions and improved family can not be achieved if communities are dysfunctional. To provide safe water and safe sanitation may do nothing to alleviate poverty because the causes of poverty are understood to be more than a lack of material facilities. Provision of only the facilities amounts to what is aptly referred to as the 'sticking plaster' approach (Chambers, 1983) to development and does nothing to rectify the underlying causes of poverty, which may be social disintegration or disorganisation. Following Maslow's (1957) contention that basic needs must be fulfilled

before the higher needs can be attempted , a healthy community is one in which all basic needs are satisfied.

> *... a healthy man is primarily motivated by his need to develop and actualise his full potentials and capacities. If a man has any other basic needs in any active chronic sense, then he is simply an unhealthy man. If we were to use the word 'sick' in this way, we should then also have to face squarely the relations of man to his society.*
>
> *One clear implication of our definition would be that*
>
> 1. *since a man is to be called sick who is basically thwarted and since*
> 2. *such basic thwarting is made possible ultimately by forces outside the individual*
> 3. *the sickness in the individual must come ultimately from sickness in the society.*
>
> *The 'good' or healthy society would then be defined as one that permitted man's highest purposes to emerge by satisfying all his prepotent basic needs* (Maslow, 1943).

'Community Health' is therefore defined in terms of mental, spiritual and physical welfare. Thus, a Community Health Club should not limit its activities to prevention of disease, but tackle all the determinants of health, both social and structural, providing a forum for psychosocial support as well as disease prevention. Health education is the entry point into a process that should potentially become part of a long term healing of the social malaise.

5.4.2.The Concept of a Club

A club is, by its very nature, exclusive, in that members have a common interest not shared necessarily with those outside the club. They tend to set themselves apart from others by self-identification of attributes for which members are recognisable. They perceive themselves as different in that they share a common ethos or purpose. They understand each other; they speak the same language. The concept of a 'club' has provided detractors with an opportunity to criticise the elitism that this may denote. However this delineation of a dedicated group within a club, is in fact, its strength. There are privileges and opportunities within the club, which are not open to non-members, and this makes it desirable (and worthwhile) becoming a member. As there are no qualifications to becoming a member, a Community Health Club is, in fact, not an elitist group, as anyone can join at any time. It is open without charge, to men and

women of all ages, all levels of education and religion. The aim is to be as inclusive as possible so that the majority of homes in each village have a representative within the club.

The club identifies itself publicly by a specific name representing its objective; it has a constitution outlining its rules; a democratically elected executive committee, voted annually, headed by a chairperson, secretary and treasurer. Membership is gained by free registration and records of attendance are carefully kept. A membership card is issued to each member, listing the topics to be covered and recommended practices. Upon presentation at each session the card is signed by the facilitator recording which topics have been attended, and date of attendance. Often members identify themselves by uniforms, and a banner is made showing a map of the catchment area of the club, indicating all homesteads, members, and relevant facilities. Each Health Club has its own health songs and slogans denoting their commitment to the ethos of good health.

5.4.3. The Objectives of a Community Health Club

The Health Club ethos is devoted to developing a 'Culture of Good Health'. This does not mean the regulation of members by repression or coercion, but the adherence by members of voluntary conversion. In effect the Community Health Club can be compared to a secular church. In an evangelical Christian Church, members also meet regularly (usually weekly), and identify themselves as brothers and sisters because they are 'saved'. In addition to compulsory church attendance, and bible reading, they may share a common moral code, which they uphold by social reinforcement. Christians identify themselves by shared observances (e.g. no drinking, smoking or adultery) and their behaviour is reinforced largely due to peer pressure.

Health Club members can similarly be recognised by their behaviour: They take care of their families with more pride, adhere to certain standards of hygiene, behave in distinct ways and their homesteads are recognised even from a distance. They have pot racks, rubbish pits, a swept compound, a latrine which is clean, a hand washing facility (HWF) with soap, a nutrition garden and fruit trees, a woodlot and very often keep bees and grow medicinal herbs. Inside their kitchens, the drinking water is stored with a cover with a ladle to draw drinking water. All the family use their own individual cups, usually displayed on a dresser moulded with clay along the wall. Members are distinctive as they use the pour-to-waste method of hand-washing rather than the traditional 'common bowl' method, and each person eats their food from an individual plate, rather than helping themselves from a common dish. Health Club members usually know all about a balanced diet and their children are healthy, their skin and eyes are clear and their hair dark, with no signs of malnutrition.

They also tend to dress smartly and are aware of their status, they are proud of their standards, and ready to 'convert' others. They 'speak the same language of good health', and perceive themselves 'empowered' and are not afraid to speak in public. The *values* of good hygiene are directing these *norms* that result in good hygiene behaviour. Instead of targeting isolated practises, the entire 'raft of changes' is expected, because a person who understands the germ theory will attend to every detail with creative intelligence, rather than by following a few prescriptive demands (See p.111, Table 12).

5.4.4. Not a just women's group

While it is true to say that women may constitute at least 80% of most clubs men are not excluded. As men tend to perceive household hygiene and children's issues as primarily their wives' concern, they tend to leave weekly attendance to their women. However, many men have joined the Health Clubs, particularly in resettlement areas, where most men remain full-time in the rural areas to farm, as opposed to communal areas where they tend to work in towns most of the year. However there is an understanding that they are there as a minority and as such few hold positions on the executive committees, even if they are in the club. Most clubs are attended sporadically by the village elders, who lend credence to the proceedings by their support. The name '***Community*** Health Clubs' rather than 'Women's Group's' or 'Mother's Groups' is used so as not to discourage men from joining. Families in which mother and father are Health Club members, as well as grandmother and daughters are held up as progressive examples to the rest of the Club because it is recognised that a forum is needed for the *whole* village to share ideas. If a programme appeals only to women, new ideas may be blocked by conservative husbands (See Annex 13.10.).

5.4.5. Behaviour Change as a Process

The main objective of all development initiatives is to bring into effect changes that will improve the standard of living in the targeted area. In addition it is more cost-effective if these standards provide lasting benefits and can be maintained indefinitely by that community. According to the 'Community Health Club Approach' behaviour change is more likely to be maintained when it is introduced through groups rather than through individuals. However change which involves the attitudes of people, does not happen in a one-off event as would be the case in the provision of facilities. Behaviour change requires time for people to adapt their thinking and their habits and for this change to take place key messages have to be periodically reinforced. If a person is malnourished the doctor does not prescribe a whole bottle of vitamin pills at once, but slowly builds up

their health with a small dose each day. This 'little but often' strategy is also used for building better practices.

5.5. THE FOUR STAGE PROCESS:

STAGE ONE: THE HEALTH PROMOTION CAMPAIGN

Fig. 6. *An example of the Membership Card for health education theory*

No.	TOPIC	DATE	SIGNATURE
1	Mapping of Village		
2	Disease Identification		
3	Balanced Diet		
4	Nutrition Plans		
5	Diarrhoea		
6	Salt Sugar Solution		
7	Home Hygiene		
8	Water Sources		
9	Drinking Water		
10	Water Storage		
11	Hand Washing		
12	Bilharzia		
13	Skin and Eye Diseases		
14	Worms		
15	Sanitation Ladder		
16	Sanitation Story : Plans		
17	Malaria		
18	Respiratory Diseases		
19	Tuberculosis		
20	AIDs and STDs		

Health Sessions take place weekly for two hours, at a regular time and place convenient for the villagers themselves. The topics at the health sessions are facilitated by a government or NGO field worker, assisted by a local Village Community Worker and Health Club Chairperson. There is a prescribed content of knowledge to be acquired and this is set out in the Membership Cards that every new member receives upon joining the club. This card is printed in the vernacular, and the topics (Fig. 6 above), may be taken in any order depending on the relevance of the topic to the season.

5.5.1. Method of Training

The training methodology is identical to that promoted by PHAST (Participatory Sanitation and Hygiene Transfer; See Section 4.8.2) using a standardised tool kit, which has been developed and pre-tested specifically for the area, and is ethnographically appropriate to the local conditions. The facilitator is provided with three sets of illustrated A4 size cards for each topic (See Annex 16: Catalogue of training materials). The facilitators will have undergone an intensive one week training in the method of using PHAST/PRA approaches so that they are conversant with

standard participatory activities using illustrated cards to be carried out with the community.

5.5.2. Participatory Activities to gain Health Knowledge

To be as inclusive as possible, the training is designed for illiterate or semi literate people, although educated people can also enjoy the sessions. Typically each session begins with an explanation of the activity. The group are divided into three sub groups and each are given a set of illustrated cards and at least half an hour to complete one of the following the activities:

- **Three pile sorting**: cards are sorted into Good, Medium and Bad piles
- **Blocking the Route**: The cards are sorted into line to show how the disease is transmitted. Other cards showing preventative interventions are then used to block each of the cards depicting a risky behaviour
- **Ranking**: Cards are ranked in order from poor to good
- **Story with a Gap**: Two cards are given: one showing an undesirable situation and one showing an improved situation. Participants are asked to work out how to move from one to another.

The groups come together into a plenary session and each group presents its activity. Extensive debate is encouraged to enable all issues to be discussed. The facilitator is purely a chairperson in the debate allowing the group to come to its own conclusions. Once problems have been clearly identified, the facilitator ensures that the group undertakes to do 'homework' before the next session.

5.5.3. Practical Application of Health Knowledge

'Homework' entails changes that can be made to household hygiene methods, such as covering water, building a pot rack or sweeping the yard. They should be within the capability of the member and should cost little or nothing to achieve. Each week a different practice is targeted, so that by the end of six months most of the common causes of poor hygiene in the home have been altered. These 'practical recommendations' are listed on the reverse of the Membership Card (*Fig 21. below*) so that members are constantly reminded of their goals.

Fig.7. Practical Recommendations for Health Club Members
(Reverse side of Membership card in Fig. 6)

No.	TOPIC
1	Village Map
2	Health Drama and songs
3	Nutrition Garden
4	Orchard
5	Protected water source
6	Covered drinking water
7	ladle to take water
8	Individual cups
9	Individual plates
10	Individual blankets
11	Mosquito nets
12	Pot rack
13	Rubbish pit
14	Hand washing facility
15	Safe sanitation
16	Clean yard
17	Disease Monitoring
18	Soap making
19	Immunisation
20	Wood Lot

A.H.E.A.D. MEMBERSHIP CARD

Name: ....

Club Name: .....

Ward: .....

District: .....

EHT: .....

Date started: .....

Date finished: .....

Graduation date: .....

Group pressure ensures that behavioural change becomes *mandatory* within the club. This is in recognition that each person's health depends not only upon their own efforts but also that of their neighbour. Home visits take place between all homes and member's offer advice to each other or encourage changes. Competitions and rewards for the best homestead are sometimes a feature of club activities. To be a Health Club member indicates a certain level of hygiene: regular hand-washing using the pouring method and soap; a pot rack; covering water; using a refuse pit and, a hand-washing facility in the homestead, as well as using cat sanitation if there is no latrine.

5.5.4. Incentives to learn

There are no incentives for attendance such as the provision of a meal, or handouts such as soap or T-shirts to entice members to come to the sessions. This practice is purposely avoided as it is seen to be unsustainable in the long term, as it is largely reliant on donor funds. The only incentive to attend sessions is the qualification for a certificate for those who attend all sessions. There is no examination or test of competence to gain the certificate, but all recommended practices must have been undertaken. The Chairperson of the Health Club assisted by the secretary, keeps detailed records of each member homestead. For every session that is attended, the member presents her/his card for a signature from the facilitator. Weekly sessions continue until all the twenty topics have been covered. Those members who have covered all topics are then entitled to receive a Certificate at a public Graduation Day.

Table 12: A raft of 50 changes expected in Community Health Clubs

DIARRHOEA, CHOLERA, DYSENTERY, & TB

1. **Covered drinking water***
2. Boiling contaminated water
3. **Use of ladle for taking drinking water***
4. **Hygienic handling of drinking water***
5. **Hygienic handling of water/food containers***
6. **Washing plates after meals***
7. **Pot rack for storing clean plates/pots***
8. **Safe storage of left over food***
9. **Use of individual cups for each family member***
10. **Use of individual plates when sharing a meal***
11. **Clean containers for water storage***
12. Washing hands before touching food
13. Washing hands after faecal exposure
14. Safe disposal of toddler's faeces
15. Keeping compound free from garbage/faeces
16. **Well managed rubbish pit ***
17. **Safe sanitation practices (cat, covered, VIP)***
18. **Clean well maintained latrine***
19. **Use of safe water source***
20. **Use of Hand Washing Facility (HWF)***
21. **Use of soap for hand washing***

SHISTOSOMIASIS, PARASITES, HOOK WORM

22. Cover faeces/use a latrine/ cat sanitation
23. Wash at home not in contaminated water sources
24. Wash plates and clothes at home
25. Do not swim or take water in contaminated sources
26. Protection when taking water from unsafe source
27. Test and take bilharzia cure

TRACHOMA, SCABIES, TAPE/RINGWORM

28. Washing children's faces regularly
29. Washing children daily
30. Pour–to-waste method of hand-washing used*
31. Avoid sharing clothes with infected people
32. Avoid shaking hands with infected people
33. Avoid sharing bedding with infected people
34. Do not use communal towels for drying hands
35. Wash clothes and bedding frequently
36. Wash with soap before sleeping
37. Keep compound well swept*
38. Wash uncooked fruit before eating
39. Keep fingernails cut short
40. Provide a well balanced diet for the family

HIV/AIDS & STDS

41. (ABC) Abstinence, Be faithful, use a condom

MALARIA

42. Empty all containers that catch rainwater
43. Fill in ruts and pots holes to prevent standing water
44. Use of mosquito net, specially for young children*
45. Cover up with long sleeves when exposed at night
46. Cut grass and vegetation around homes
47. Use mosquito repellents/coils/ make repellent
48. Use Mosbar/citronella soap for washing every night
49. Use mosquito netting on window
50. Test & take malaria cure immediately when affected

Spot observations conducted during this household survey

Revision sessions take place until all members have been given a chance to complete. It is important to note that the strict rule of '*full* attendance' before 'graduating' was determined by the Health Clubs themselves, because it was realised that an unambiguous standard would allay the inevitable problems of negotiation or favouritism if only a certain percentage of attendance was required. Certificates are presented at large public 'Graduations', and accompanied by extensive singing, dancing, drama presentations and home inspections. Local dignitaries attend and graduates are given extensive praise and social recognition.

5.6. STAGE TWO: IMPLEMENTATION

The methodology used in the training is likely to produce a strong demand for a safe drinking water supply and sanitation. The need for a protected water supply and safe sanitation facilities are key components of environmental health. However these

facilities cost more than is normally affordable by rural householders and it is therefore important that before starting Community Health Clubs, a water supply intervention is planned to follow immediately after the health promotion phase. Within emergency programmes, water and sanitation provision can be done concurrently with health promotion, although this is not as ideal in ensuring the community is well prepared.

5.6.1. Water Supply Programmes

By the end of the health promotion stage, the community has organised itself, and is fully capable of the management of the water supply aspects of a programme. If a communal facility such as a protected spring or borehole is to be installed each water point should be allocated to a specific Health Club to take as it is own responsibility. A training course on Community Based Management (CBM) is organised for all those nominated by each Club to become members of a water point committee. This team will preferably be headed by a women, with a pump technician and treasurer, who will have direct responsibility for the maintenance and cost recovery mechanisms. Members who train for CBM must have gained their Health and Hygiene certificate to ensure they are fully. committed. They are issued with CBM Cards outlining their training (See Annex. 5), and receive Grade 2 certificates upon completion of the CBM training.

Many water and sanitation programmes in developing countries have started implementation without adequate preparation of the community and therefore facilities, which have been provided are sometimes abused by the beneficiaries, as they are not perceived as being owned by the community. This lack of ownership affects future sustainability and maintenance of systems. By starting with the formation of Health Clubs and six months of preparatory health promotion, the water and sanitation component will be well appreciated by the community. By contrast Health Clubs stimulate a strong demand for sanitation (Waterkeyn & Waterkeyn, 2000). The intervention discussed in this thesis, was designed to allow for six months of health promotion prior to a sanitation programme being implemented.

5.6.2. Sanitation Programmes

Safe sanitation is obviously another key component of environmental health (Esrey, 1997) and the hidden agenda of Health Club promotion is to ensure that a high proportion, if not all the members of the Health Club, build their own family latrines. Designs and standards for latrines vary from country to country, and each intervention will target a certain level on the 'sanitation ladder' suitable for the local

context (See Annex.16). At the lowest level, perhaps as an interim measure in an emergency programme, this may entail encouraging all members to practice 'cat sanitation', the simple burial of faeces in a covered hole when defecating in the open. In many cases cat sanitation can be more hygienic than poorly maintained latrines where faecal deposits can be found around the pit, and flies have ready access to faeces deposits in uncovered latrines. This simple method, together with Alternating Compost Latrines was used in Sierra Leone in post-conflict resettlement of 50 villages (Waterkeyn & Waterkeyn 2001). Operating through Community Health Clubs, this sanitation promotion achieved zero open defecation within a six month period. A simple traditional pit latrine with a well-fitting cover and a cleanable sanplat[10] or slab may also be an achievable level. This design was used in 120 Health Clubs in 15 Internally displaced peoples (IDP) camps in Uganda. Within 6 months there were 12,000 traditional latrines were built over half with either cement or polyfibre sanplats (Waterkeyn et al., 2005). The Blair Latrine, with lined pit, slab, and ventilation pipe, was the standard level acceptable in Zimbabwe, where over 3,600 Blair Latrines (approximately 30% of all latrines built in Zimbabwe that year) were built in 18 months in two districts (See Table 16).

Health Club members understand the need for good sanitation and in three countries where Health Clubs operate have shown a ready ability to run their own sanitation programmes. Even women readily engage in the construction of household latrines. They dig pits (approximately 3 metre deep), line them if required, make sanplats, as in Uganda and also can be taught to construct the superstructure as in Zimbabwe. The organisation of the programme can be done within the Health Club and records kept by the chairperson and secretary, thus alleviating much of the cost and involvement of the partnering NGO. This approach also ensures that latrines are really owned by the people themselves and thus maintained properly. In all three countries only those who had completed the Stage One, (health promotion component) were included in the Stage Two latrine building. Whilst this criteria may appear exclusive, it was in fact a key factor which ensured all latrines were properly maintained and constructed for the reasons for which they were intended, safe disposal of faeces. Limited resources within most sanitation programmes make it imperative that those that do benefit from sanitation subsidies are likely to make good use of the assistance, and this criteria ensures that these resources are not wasted.

[10] Cleanable, durable (usually cement) surface to a pit latrine, distinct from a concrete slab which is self supporting. n Gulu a new polyfibre plastic moulded sanplat was designed by the author and produced in Uganda for the first time.

5.7. STAGE THREE: SUSTAINABLE LIVELIHOODS

The determinants of health as identified by the Ottawa Charter (1986) emphasis that for an individual to achieve complete well-being he/she should to be able to *'identify and realise aspirations, to satisfy need and to change or cope with the environment'* (See Section 1.1). In the context of rural areas of developing countries, this means to be able to achieve a sustainable livelihood on the land, the means by which most subsistence farmers can avail their existing skills and resources. The Health Club members at the end of two years are not only fully 'health literate' and 'sanitation-conscious', with appropriate facilities to match these ideals, but the Health Clubs are in a strong position to become a *vehicle* for any other development initiatives that the community need to undertake. In order to stem the flow of villagers to the urban area seeking employment, and to enable rural areas to become a viable means of sustainable livelihoods, rural enterprises need to be established. There is an opportunity to use the existing Health Club as institutions to provide opportunities for additional skills training for income-generating activities based on local resources.

Each Health Club divides into smaller groups, with each group specialising in one activity, so that every member can achieve a particular skill. A PRA (Participatory Rural Appraisal) workshop is held to identify individuals priorities and training follows, ensuring that each member in the Health Club develops a particular skill, and has access to the required machine. By providing Health Clubs with minimal appropriate technology such as hand-operated oil presses, soap-cutters and food-driers, women farmers in particular are quick to produce extra crops and make dried vegetables and herbs, oil, soap, insect-repellent lotion, all of which is saleable locally and can provide an income. In addition with training in organic vegetable and herb growing, community nutrition gardens particularly associated with boreholes maintained by the community Health Clubs can generate an extra income to sustain the most vulnerable members. Any intervention that is undertaken with a well-organised community Health Club will be likely to succeed, as they have been an operational unit with a proven capacity for change. At this stage the Health Club is often used by other agencies wanting to engage in other programmes.

The 'Sustainable Livelihoods' (DFID, 2000) approach, has highlighted the fact that poverty is the underlying factor responsible for poor health. Therefore, taking health in its broadest sense, the well-being of the family cannot be improved unless there is an assured means of income, preferably allowing the mother to earn and control her own earnings for the benefit of the family. Many of the recommendations such as individual plates and blankets, mosquito nets, latrines and a balanced diet require more income than is usually available within the family budget. Additional income is

needed to raise living standards, and this is seldom provided by the husband who usually has other priorities. Beer, radio or bicycles tend to take preference over new blankets, plates and kitchen equipment which would be the usual mother's priority. In addition, the death toll from AIDS has meant the death of the bread winner and many women are having to provide for their families, often with few skills or resources. The income generating activities within the club have enabled women to support their families and provide school fees (See Section 9.1.3.1. and 9.1.3.2).

The crucial aspect of all these ventures is the training in financial management to ensure sound bookkeeping. A local co-ordinator for all the clubs in one ward is then elected from the Health Clubs and trained, and has the responsibility to monitor all the groups, and assist with financial and managerial problems.

5.8. STAGE FOUR: SOCIAL DEVELOPMENT INITIATIVES

This is an open-ended stage to cover many of the social aspects that have not been addressed so far under the largely practical activities of the club. Issues that arise here are often psychosocial problems, such as wife abuse, child abuse, alcohol and drug abuse, care of widows, orphans and the terminally ill, resulting from HIV/AIDS. It may also cover training in human rights and voter education, and it addresses issues of self-confidence, self-efficacy, and emancipation. This is the time to ensure that each club has a trained Adult Literacy Tutor, so that club members can become fully literate. Social Development is an ongoing process and should ensure that permanent structures exist within the village to deal with all social problems of the area. The Community Health Club by this stage will have become a key organisational structure for the area, taking responsibility for ongoing monitoring and support of all its members and the public at large.

Having been working together for over three years, Community Health Club members have a well-developed sense of responsibility for the health of the family. It is a small step to extend this ethos to the community, particularly when a high percentage of the community are already represented in the Health Club. The ultimate test of a successful Health Club is whether it can find the resources within itself to attend to the orphans and widows and terminally ill within the area. The causes of HIV/AIDS will have been discussed, and mechanism to prevent the spread of HIV will have been put in place in the first year of the Health Club. However this does not deal with the long-term problem of how to cope with the number of dependent widows and orphans, in countries where there is little government support.

In the fourth year, a home base care trainer for each club is trained, who is responsible for overseeing all the cases within the area, ensuring that families know how to care for the terminally ill, make provision for children, and provide counselling in non stigmatisation and for the bereaved. The Health Club keeps a record of all those living with AIDS and ensures they are supported by Health Club members in terms of food, clothing and other essential services such as fetching firewood and water. A percentage from income generating projects is sometimes put towards a fund for school fees for orphans, and mothers have a roster to assist child-headed families and ensure community support. Programmes to enable the families of people living with AIDS (PLWAs) to earn an income is essential. For example in Makoni district, irrigation drip kits were distributed to PLWAs to enable them to easily water their own nutrition gardens. Bee hives and training in bee keeping was given to the families of PLWAs (See Annex.2) who were also taught to propagate herbs and uses herbs for medicinal purposes to combat the many opportunistic infections that make the life so difficult for those living with AIDS. This helped to alleviate many of the social problems of AIDS.

5.9. DEVELOPMENT IN STAGES

There is no blue print for a 'development package' that can be neatly transferred from one context or country to another. However given the demands of daily living for subsistence farmers, and women in particular, it is clear that development agencies must be careful not to overload a community with every type of initiative at the same time. It has been found that the method used in the Community Health Club Approach which staggers different interventions into roughly four main phases is also a logical progression that has suited the communities in Zimbabwe, where some Health Clubs have now been operating for ten years.

This is the only country where the Community Health Club Approach has been taken to its full potential. For the sake of clarity the process of development has been divided into four separate stages, although in practice the stages often overlap and are not always in the order prescribed. For example in Ugandan IDP Camps where there was an emergency situation, funding requirements dictated a six month time frame. Therefore, the health promotion and sanitation components ran concurrently and the community was responded equally well. The use of Community Health Clubs only for health promotion, water and sanitation is usually dictated by funding restraints and a vertical programme designed to target specific health problems, rather than to address community health in its totality. Once a Community Health Club has been though all four stages the supporting agency can exit with the knowledge that the community can

sustain its own development, and that all the determinants of health have been addressed.

Fig: 8. *The Four Stage process of development in Community Health Clubs*

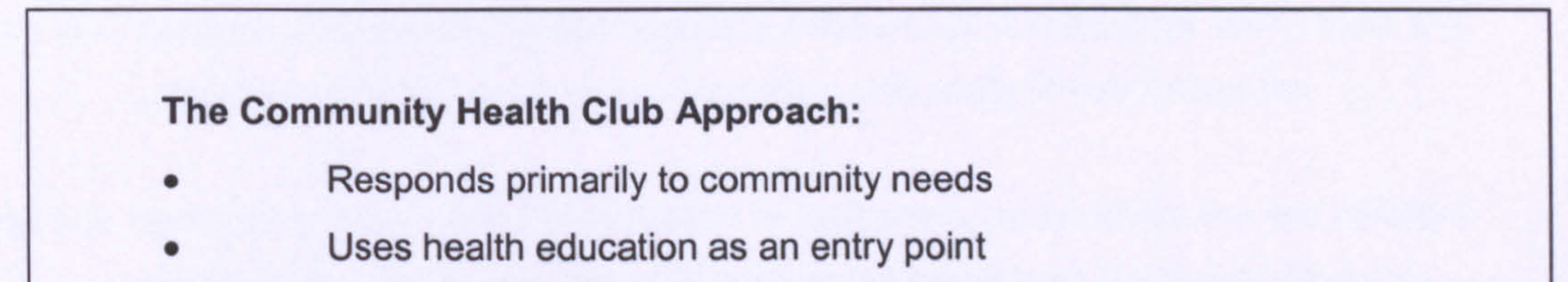


Table 13: *Characteristics of the Community Health Club Approach*

The Community Health Club Approach:

- Responds primarily to community needs
- Uses health education as an entry point
- Involves a long-term partnership through different stages
- Uses participatory training techniques to develop self-efficacy
- Structures health promotion into an agreed syllabus
- Transfers a quantifiable amount of health knowledge
- Transforms knowledge into applied hygiene
- Achieves behaviour change through peer pressure
- Creates a strong demand for sanitation
- Promotes a broad spectrum of development initiatives
- Forms a strong community based organisation (CBO)
- Quantifies cost-effectiveness of the programme;
- Cuts across sectors within Government ministries
- Enables sustainable development
- Deals with social issues such as PLWAs

5.10. EVALUATION OF THE MODEL

Any valid model of human motivation should have predictive power (Nutbeam, 1999), The success of this strategy will be gauged by the ability of a Community Health Club to:

- increase the knowledge of its members in health and hygiene issues;
- ensure that members modify their habitual behaviour and improve their home hygiene;
- sustain itself as an institution after the external intervention has ended.

Having described the social mechanism at work within Community Health Clubs, the next Chapter will outline the intervention as it was carried out in Zimbabwe.

CHAPTER 6: THE INTERVENTION

SUMARY

This Chapter describes the implementation of the Community Health Club Model in the field.

Section 6.1. describes the expansion in number of Community Health Clubs and members between the field trial in 1995, scaling-up firstly to a pilot project in 1997, and to then to five districts in Zimbabwe between 1999 and 2001.

Section 6.2. focuses on the four stage intervention area in Makoni District, with comparative demographic statistics with Tsholotsho, and Community Health Clubs.

Section 6.3. describes the extent of the intervention in Tsholotsho District.

Section 6.4. differentiates between standard PHAST training in participatory activities in Zimbabwe and how in Community Health Clubs this became more structured.

Section 6.5. provides background to the separate roles of all stakeholders involved in the implementation of health promotion, water and sanitation programmes.

Section 6.6. highlights issues related to sanitation in Zimbabwe, and outlines the two different methods of subsidy and design of latrines in Makoni and Tsholotsho Districts.

Section 6.7. shows how the *inputs* of the EHT and the *outputs* in terms of hygiene behaviour change can be effectively quantified and monitored by the community

Section 6.8. records the cost-effectiveness of the implementation, with Hygiene Promotion being at 35c – 22c (US$) per beneficiary.

Section 6.9. shows how Health Clubs have become institutionalised in Makoni District

Section 6.10. describes the activities in Stage 3, where in Makoni District Community Health Clubs split into over 500 income generating activities, raising substantial funds.

Section 6.11. describes the Stage 4, Social Development, when Community Health Clubs take full responsibility for dealing with the substantial social issues related HIV/AIDS, caring for the terminal ill and vulnerable families in each village.

6.1. THE INTERVENTION

6.1.1. Field Trial of Community Health Club Concept (1994-1996)

The concept of the Community Health Clubs was tried out in a small field study (1994)[11] in which six Health Clubs were established in Ruombwe Ward in Makoni District, Manicaland Province. It was anticipated that there would be thirty women per club, but after six months there were six clubs with 615 members, an average of 102 members per club. Subsequently the field trial was expanded for another six months to two other wards (Tanda and Nyamidzi) in 1995 and demand was equally encouraging, reaching fourteen clubs with an average of 97 active members; this increased the following year, 1996, when the same trainers started new clubs in existing wards bringing the total number of Health Clubs to thirty by 1997, with 2,846 members. The demand in the two new wards was as strong as in Ruombwe ward, indicating that it was not the personal capacity of the EHT which was causing the high membership in the Health Clubs. In 1997, a Pilot Project[12] was established in a total of ten wards and membership increased to 6,561. The same pattern of community response was evident in all wards and all EHTs reported high levels of interest in the hygiene training and positive uptake on recommended practices by club members (Zimbabwe AHEAD, 1999).

6.1.2. Scaling up the intervention

With the increasing demand, funds were sought to start an NGO, which was established for the purpose of expanding the approach. Zimbabwe A.H.E.A.D Organisation (Applied Health Education and Development) was established for this purpose in 1998.

The following year the intervention went to district scale[13] and by the end of the year there were 7,909 members in 131 clubs run by 13 EHTs in 20 wards in Makoni District. Elsewhere (by the end of the first year of the NGOs operation), there were another 103 clubs in Gutu District with 7,543 members in 11 wards each with an EHT, and 26 clubs in Tsholotsho District with 1,545 members run by three EHTs. In addition there were two other districts where EHTs had independently started Health Clubs without external funds: four clubs with 250 members in Chivi and Mazowe Districts.

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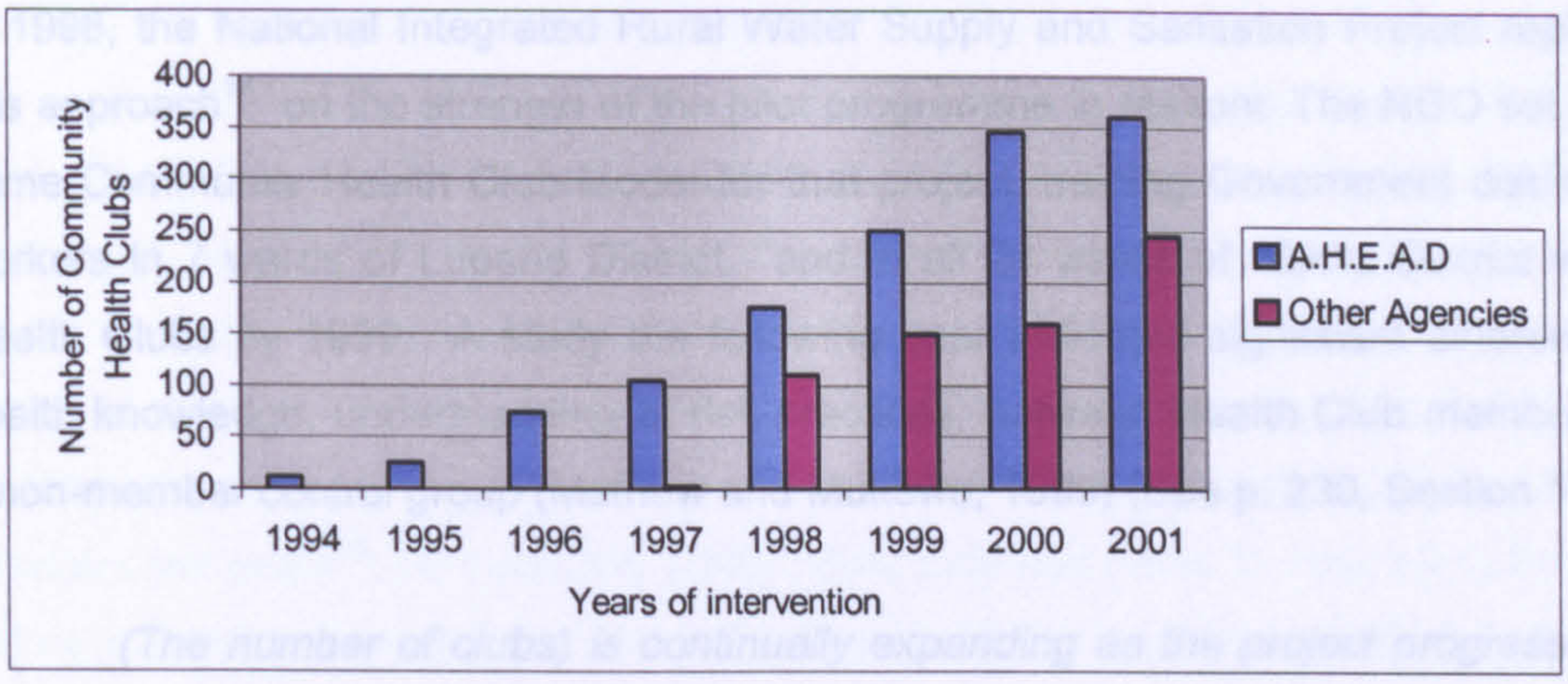
[11] Makoni District Community Health Club Field Study (Funded by Unicef)
[12] Makoni Community Health Club Pilot Project (1996-7) (Funded by Oak Foundation)
[13] Makoni Preventative Health Campaign (Funded by Danida (1998-2000)

Fig.9. *Increase in number of Community Health Clubs in Zimbabwe (1995 to 2001)*
(Source: Zimbabwe A.H.E.A.D Organisation)



The total number of club members was 17,282 in 5 districts, which at an estimated household size of six, implies a total of 103,692. Membership is calculated only on active attendance, and not on those who have merely registered and hold a membership card. Therefore the membership numbers reflected throughout this study are conservative, considering that some members may be semi-active and have not been counted as they did not attend consistently.

By February 2001, when the interventions ended formally there were 11,450 members in 265 clubs in 23 wards in Makoni; 2,105 in Tshotosho in 32 clubs and 4,505 members in Gutu in 85 Health Clubs in 16 wards with 12 EHTs. Seven of the EHTs in Gutu were emulating the CHC intervention without financial support or monitoring. The average number of active members in each club between 1995 and 2000 within 265 clubs in Makoni District was 100 active members; between 1999 and 2001, in Gutu District the club sessions averaged at 57 members at each meeting and in Tsholotsho the average attendance was 47 members. In Makoni and Gutu, EHTs allowed clubs to expand to meet demand, whereas in Tsholotsho size of club was limited to 60 members.

Table 14: *Expansion of Community Health Club Intervention in Makoni District. 1995-2000*
(Zimbabwe AHEAD Annual Reports)

Expansion of CHCs	1995	1996	1997	1998	1999	2000	Total
New Wards in Makoni	1	2	1	6	12	1	23
New EHT trained	1	2	0	0	13	2	18
Accumulated membership	615	1,976	2,846	6,561	7,969	11,450	11,450
Number of new clubs p.a.	6	14	10	25	69	141	n/a
Accumulated no of clubs	6	20	30	55	124	265	265
Average # members per club	102	97	87	149	85	81	100

6.1.3. Replication of the Community Health Club Approach by other Agencies

In 1998, the National Integrated Rural Water Supply and Sanitation Project replicated this approach[14] on the strength of the pilot programme in Makoni. The NGO set up the same Community Health Club Model for that project, training Government district field workers in 7 wards of Lupane District, and in all 28 wards of Bikita District with 72 Health Clubs by 1999. A study the following year indicated significant differences in health knowledge, understanding of risk practices, between Health Club members and a non-member control group (Mathew and Mukuwe, 1999) (See p. 230, Section 10.4).

(The number of clubs) is continually expanding as the project progresses and is proving popular with EHTs who find it a rewarding way of doing their work. The success of Health Clubs as a method is apparent from their high attendance; the groups are free, open for all to join at any time, and topics are covered and recovered without generating any fall in membership. The popularity of this approach is as much the enjoyment of joining a group, as the desire to obtain health and hygiene knowledge. Sessions are entertaining and offer a break, along with church meetings and beer parties, a distraction from a hard week working in the fields and undertaking household duties (Mathew and Mukuwe, 1999).

Another NGO also introduced 19 Health Clubs in 4 districts in 2000, using the same training material and approach[15]. By 2000, there were approximately 170 Community Health Clubs in Bikita District, and the Community Based Management of waterpoints had been extended to the use of water for productive nutrition gardens. Two independent studies were undertaken which highlighted the methods used in Community Health Clubs: one addressing the factors influencing low cost sanitation in Zimbabwe, using Tsholotosho as a case study (Mpofu, 2001); the other an analysis of rural water supply and sanitation projects, (Chiwandire, 2000), comparing four implementation strategies employed by NGOs in Makoni District. This survey concluded that compared to other intervention strategies, the NGO had ... *'the best approach of handling projects since they have proved to be very transparent in their approach to involve stakeholders in planning, implementation and act according to plans, whereas others just provide funding as per request without them planning on how to use the funds with stakeholders'* (Chiwandire, 2000).

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[14] Bikita Integrated Water and Sanitation programme and Lupane Integrated Water and Sanitation programme, (both funded by DFID)

[15] CARE International Rainwater Harvesting Programme, trained by ZimAHEAD

6.1.4. Selection of Districts for Research

The districts of Makoni, Gutu and Tsholotsho varied in terms of the length and extent of the implementation in terms of the four stages of the Community Health Club Model (See p.117, Fig. 8). Only Makoni District has completed all four stages as outlined in the Model. All three districts started with Stage One (1999): a six month to one year period of Health Promotion. In Stage Two, in the year 2000 Tsholotsho had sanitation and a borehole rehabilitation component, whilst Makoni had funding for sanitation, but no funds for water as there had been substantial construction of family wells within the previous two years[16] (Chiwandire, 2000). Gutu only had funds for upgrading boreholes but no sanitation because this district had amongst the highest sanitation coverage in the country at 53%.

An important indicator of the Community Health Clubs' success is their ability to stimulate latrine building. Demand-led sanitation is one of the key areas of interest in this thesis, but only in Makoni and Tsholotsho Districts could community demand for sanitation be assessed. Gutu District could not provide evidence for a full assessment of the potential for Community Health Club activity as demand for sanitation in Gutu had to be ignored; no funds had been allocated for this activity. In addition, although data were collected from Community Health Clubs started by other Agencies in Bikita, Lupane, Chivi, and Zaka Districts, these will not be considered in this thesis due to insufficient background and monitoring during the intervention by the author. A base-line survey of 300 respondents in Gutu and Tsholotsho was conducted (Taburakura, 1998) in all three NGO implemented areas but is not part of this research as indicators were incompatible making a comparative analysis more difficult.

6.2. MAKONI DISTRICT

6.2.1. Background to Makoni District

Makoni District is a Shona speaking district in Manicaland Province, in the East of the country, near the border with Mozambique. It stretches between Macheke and Mutare (See p.126, Fig. 10, Map of Makoni. below) and the administrative centre, Rusape, is a two hour drive on main roads from the capital, Harare. The projected population in the district in 2003 was calculated to be 358,733 (1992 census). This district is approximately 802,800 hectares in size with 35 wards in the district; each ward has a population of approximately 10,000 per ward (2,000 households), with between five and seven villages (See Fig.9. below). Although there should normally be one Environmental Health Technician (EHT) per ward, to supervise water, sanitation and

[16] Mvuramanzi Trust had constructed over 5,000 family wells in Makoni 1994-1997 (Chiwandire, 2000)

health promotion, due to a shortage of staff in Ministry of Health, there are only 15 EHTs stationed at rural clinics. There are 28 communal and seven resettlement wards where the predominant Shona subsistence farmers live on small holdings. In addition there are two peri-urban areas and five commercial farming areas with large plantations (average 2,000 hectares), mainly of tobacco, cotton and maize. At the time of the intervention (1999-2001), most of these estates belonged to white farmers, but with the Government land redistribution initiative between 2000 and 2005, most farms have been compulsorily acquired and reallocated.

The district receives an average rainfall of 1000-1500 mm per annum, with most communal areas having poor soils and lower rainfall. The district water and sanitation programme was one of the first to be started in the country in 1985, with an Integrated Programme[17] in 1988, with significant donor support (Chiwandire, 2000). With 24% sanitation coverage, Makoni is higher than the national average of 21%. It also has the second highest water coverage in the country with 1,710 communal water points (NAC, 2000), and 5,107 family wells (Chiwandire, 2000).

In order to provide some information on the disease trends in the intervention area in 2004 Ministry of Health annual reports were used from a sample of ten wards in Makoni District (Waterkeyn, 2005), giving a nine year spread. As a preliminary research into the effectiveness of Community Health Clubs to affect disease patterns, this information was collected to see if there was any variation in the normal disease pattern in wards where Community Health Clubs were operating. A sample of eight Health Centres, as well as two District Hospitals (Weya and Tanda), were selected, and their records examined for disease trends in diarrhoea, bilharzia, malaria, skin diseases and eye diseases (See Annex 14).

6.2.2. Stage One and Stage Two: Outputs from the intervention in Makoni (1999-2001)

Makoni was selected as a pilot area for the Community Health Clubs.[18] From March 1999 – September 2000, a total of 3,731 health promotion sessions were held (See Table 13, above), costing an average for two years of 63c (US$) per beneficiary, for training costs including start-up expenses (Waterkeyn 2003). As there was a reasonable coverage of family wells at the time of programme design, there was no provision of funding for water in this project, and implementation focused only on the

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17 This is a national programme started in some districts in 1985 to provide inter-sectoral implementation in water and sanitation co-ordinated by the District Water and Sanitation Subcommittee within the Rural District Council

18 Previously the new Provincial Environmental Health Officer (PEHO) had worked with the author to develop and pre-test the training materials for the PHAST Toolkit at the Domboshawa Training Centre, and was interested to monitor the use of participatory activities in the field trial in Manicaland Province where he had recently been appointed. Makoni District was nominated by him.

construction of VIP (Blair) Latrines. Within two years, 2,400 Ventilated Improved Pit (VIP) latrines were built by club members in this district, which were subsidised at US$20 per household (Zimbabwe A.H.E.A.D, 2000). The numbers of members expanded rapidly as discussed above (See Table 15) until the CHC Model covered 23 wards, which was most of the communal areas in the district.

Table 15: *Comparative Community Health Club statistics for Makoni District and Tsholotsho District, 2000 (Source Zimbabwe AH.E.A.D, 2001)*

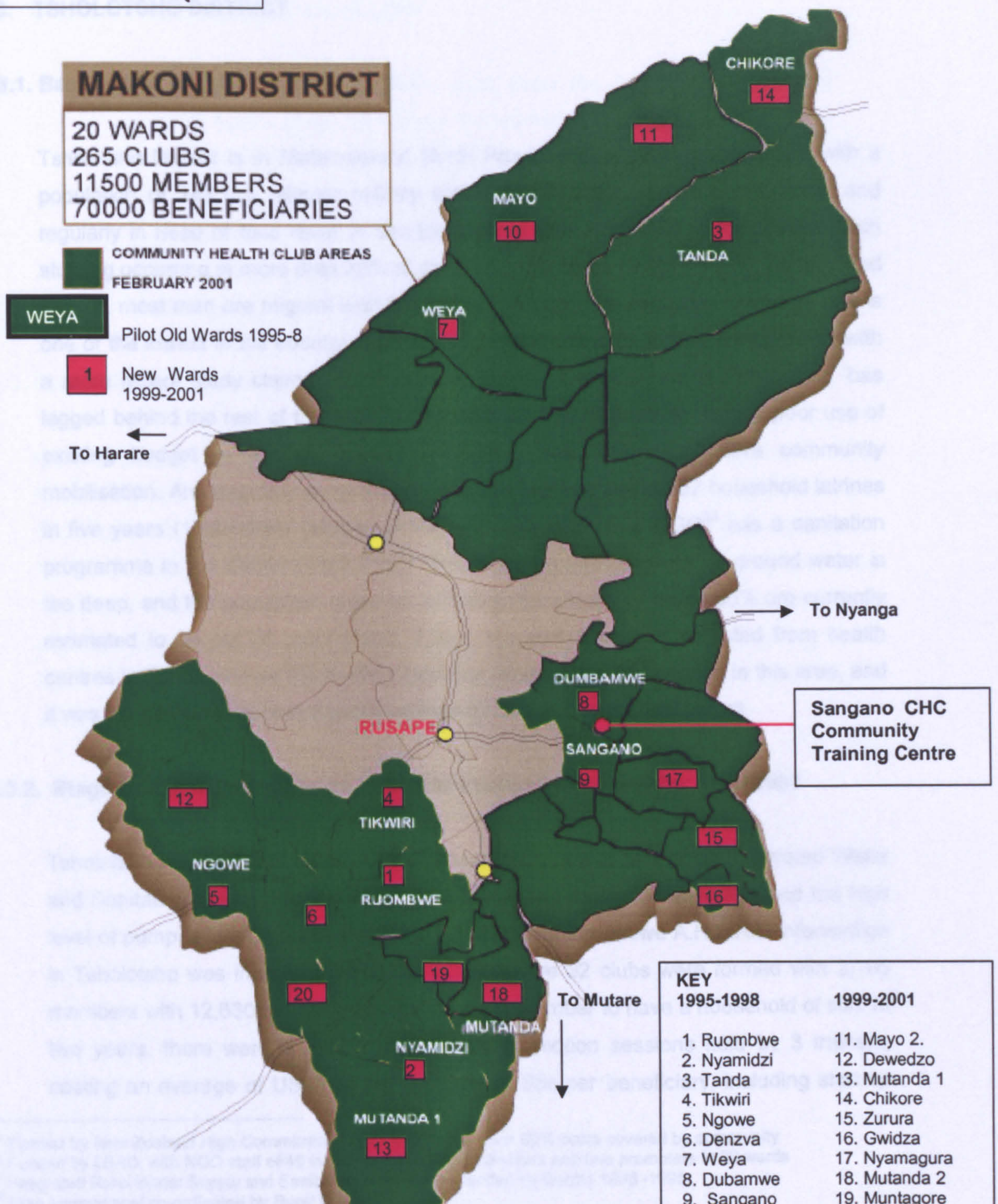
District	Tsholotsho	Makoni	Total
Population	142,713	358,733	501,446
Wards	19	35	54
Intervention wards	3	21	25
Clubs	32	265	297
Members	2,105	11,450	13,555
Graduated members	68%	36%	52%
Beneficiaries	12,630	68,700	81,330
No. of health education sessions (1999/2000)	832	3,731	4,563
Cost HE per beneficiary	US 35c	US 63c	US 63c
EHTs trained/in district	3/15	14/15	17/30
Family wells	0	839	839
Functioning boreholes	286	676	976
Sanitation coverage	16%	24%	20%
Latrines 1999/2000	1,200	2,400	3,600
Subsidy per latrine	US$ 15	US$ 20	US$17.5

6.2.3. Stage Three and Stage Four in Makoni

After Stage Two (Sanitation) the intervention was formally terminated in February 2001, but Community Health Clubs continued to function using their own resources. The NGO scaled down to district level, maintaining only three staff in Makoni District with an annual budget of US$30,000 for three years, for monitoring small scale income generating projects in 2000, (See Annex 2.2), an adult literacy programme (2001), a HIV/AIDS Intervention (2002), and a borehole rehabilitation programme (2003)[19]. By the end of 2003, a Literacy teacher and a Home-based Care Trainer had been trained for each club, and ward co-ordinators had been trained for the 10 old wards where income generation was flourishing sourcing loans from government revolving funds, with no funds from the NGO. In 2002 in the 10 original wards (See Map. Fig. 10 above) the income generation in 87 clubs raised an income of US$ 63,984, almost doubling the investment in them in one year (See Annex 2.2).

[19] Funded by Trocare

Fig. 10. *Map of Makoni District showing intervention wards*



In addition 10 clubs in two wards (Dumbabmwe and Sangano) constructed a Community Training and Market Centre (See Map: Fig 10) for the sale of the extensive Health Club produce and for further Health Club training.[20] In 2004, an extensive bee-keeping and herb growing programme[21] involved 10,000 producers and generated substantial income (See Annex 2c).

6.3. TSHOLOTSHO DISTRICT

6.3.1. Background to Tsholotsho District

Tsholotsho District is in Matebeleland North Province in southwest Zimbabwe with a population of 142,713, almost entirely settled by Ndebele. It is drought-prone, and regularly in need of food relief. It has the highest rate of chronic under nutrition, with stunting occurring in more than 25% of children under three (NACP, 1998). As farmland is poor, most men are migrant workers in South Africa. The sanitation coverage rate is one of the lowest in the country, between an official estimate of 16% (NAC, 2000) with a more recent study claiming 21% (Mpofu, 2001). Development in Tsholotsho has lagged behind the rest of the country, due to poor flow of funds to district, poor use of existing budget in district, cement shortages, and lack of effective community mobilisation. An integrated programme[22] through MoH achieved 857 household latrines in five years (1990-1994) (Mpofu, 2000), and only one other NGO[23] has a sanitation programme in the district (1992-2001). There are no shallow wells as ground water is too deep, and the population relies on 817 deep boreholes, of which 65% are currently estimated to be out of order (NAC, 2004). No statistics were collected from health centres in Tsholotsho as the health promotion intervention had ceased in this area, and it was dangerous to access the district during 2004 due to political unrest.

6.3.2. Stage One and Two: Outputs from intervention in Tsholotsho: 1999-2001

Tsholotsho was selected as an area of intervention due to lack of an Integrated Water and Sanitation Supply Programme[24], poor water and sanitation coverage and the high level of pump failure on boreholes (DFID, 1997). The Zimbabwe A.H.E.A.D intervention in Tsholotsho was in only 3 wards out of 19, where 32 clubs were formed with 2,105 members with 12,630 beneficiaries (taking each member to have a household of six). In two years, there were a total of 832 health promotion sessions held by 3 trainers, costing an average of US$3.35 per member or 35c per beneficiary, including start-up

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[20] Funded by New Zealand High Commission (2001-2004), with over 60% costs covered by community
[21] Funded by LEAD, with NGO staff of 40 including 20 ward coordinators and bee promoters in 20 wards
[22] Integrated Rural Water Supply and Sanitation programme (funded by Dutch) 1993 -1995
[23] Plan International co-ordinated by Rural District Council
[24] This is a national programme started in some District in 1985 to provide inter-sectoral implementation in Water and sanitation co-ordinated by the District Water and Sanitation Subcommittee within the Rural District Council

costs (Waterkeyn 2001). All targets were met with 150 boreholes rehabilitated and 1,200 latrines built in 18 months, subsidised at US$15 each (Zimbabwe AHEAD, 2000). An independent evaluation (Muringamza, 2002) identified the lack of exit strategy as a major failing as the demand for sanitation, which had been created could not be met, due non-renewal of funding due to socio-political factors (See p.77. Section 4.4.). As there is so little literature on the Community Health Club approach his comments as an external assessment have been included.

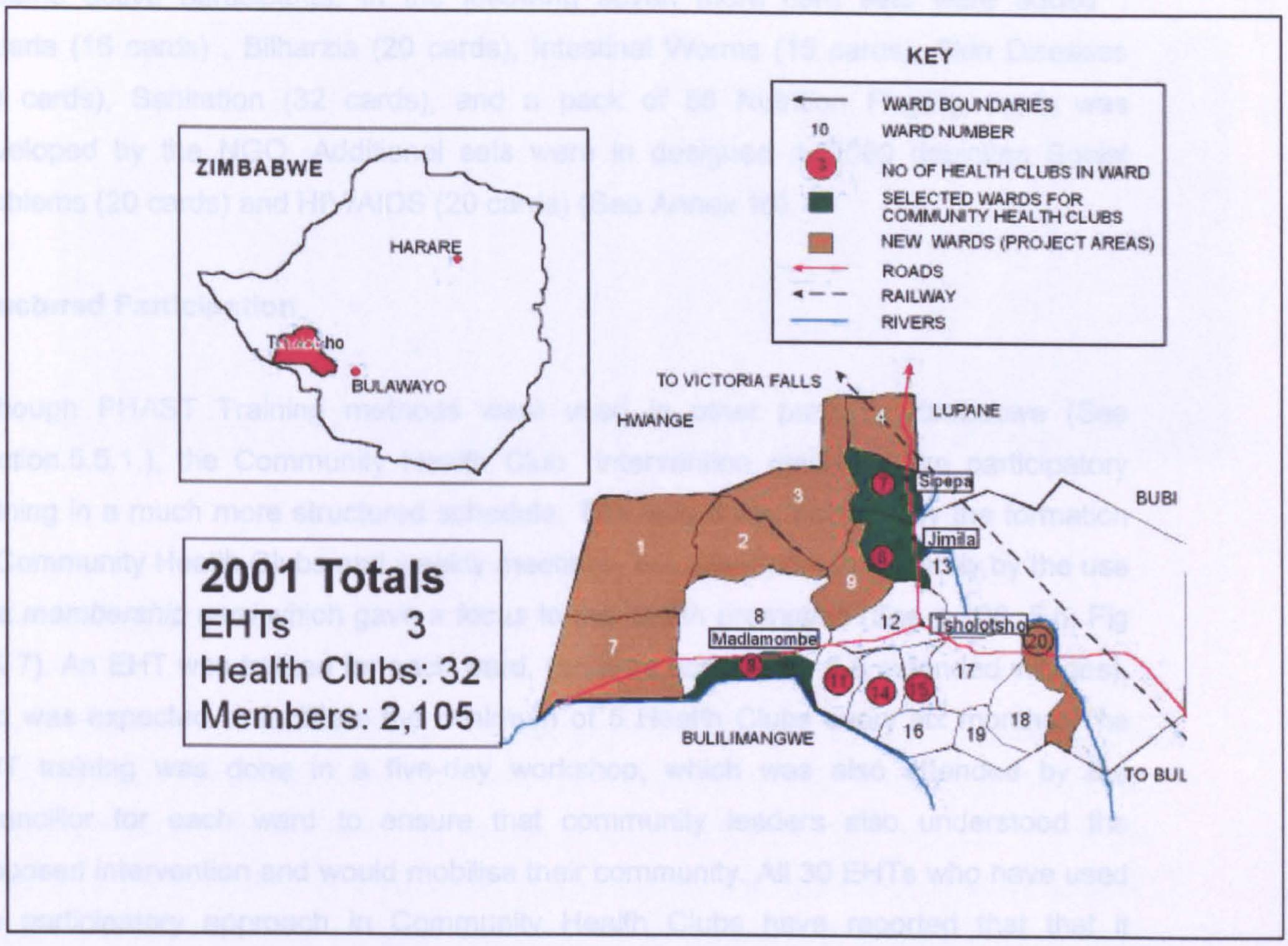
> *The Community Health Clubs have been the biggest achievements towards social issues especially for women and should be seen as a foundation for further and other development issues/projects. Women feel more empowered and regarded as part of the society. CHCs should be promoted to a higher level than at present and council should take advantage of the idea and make other NGOs and government aware as to increases in income generating projects.'* (Muringamza, 2002)

6.3.3. Stage Three: Income generation

An attempt was made in 2000 to start income generation within the Health Clubs with the production of handwashing facilities and cement blocks in all three wards of Sipepa, Jumila and Madlamombe. A larger initiative was started in Jimila ward training 10 women in hand-made paper making, which continued for two years.[25] This area was one of the worst hit by political unrest in 2001 and by subsequent flooding, and many were relocated from the area where CHCs had been operating. With the scaling down of the NGO and lack of fuel in the country no subsequent follow-up has been made to ascertain if CHCs are still functional in Tsholotsho.

[25] Funded by KICI, in 2000, but abandoned due to political disruption in the area, flooding in the area with many relocated and lack of fuel in the country limiting access to markets

Fig. 11: Map of Tsholotsho District showing CHC intervention wards 1999-2001



6.4. HEALTH PROMOTION TRAINING

6.4. 1. Development of PHAST Training Material

As mentioned in the previous chapter (See p.91, Section 4.8.2 and p.109, 5.5.1), PHAST training is used in the Community Health Club Approach as it enables the community to analyse their own problems, rather than be passive recipients of a didactic lecture to induce hygiene by coercion (WHO/UNDP, 1997).

Between 1993 and 1995 five sets of illustrated A5 size cards on General Hygiene (20 cards), Water Sources (15 cards), Water Storage (11 cards), Drinking Water (12 cards), and Germ Theory (14 cards), were developed by the author[26] and extensively pre-tested (See Annex 16). These were designed to be used in standard participatory activities such as 'Three Pile Sorting', 'Story with a Gap', 'Open-ended Story' and 'Blocking the Route' (Srinavasan,1990, Narayan & Srinavasan, 1994). In 1996, these card sets were incorporated into the National 'Tool Kit' and distributed to all 800 Environmental Health Technicians (EHTs) across the country. The early development

[26] Studio A.H.E.A.D developed and pre-tested the training material with the Domboshawa Training Centre, funded by W.H.O.

of training tool kits to enable participatory practices was a key facilitating factor for PHAST in Zimbabwe (UNDP-World Bank/WSP, 1998). By using a tool kit of participatory games, the trainers became facilitators, and a previously passive audience became active participants. In the following seven more card sets were added[27]: Malaria (16 cards) , Bilharzia (20 cards), Intestinal Worms (15 cards), Skin Diseases (16 cards), Sanitation (32 cards), and a pack of 55 Nutrition Playing cards was developed by the NGO. Additional sets were in designed in 2000 depicting Social Problems (20 cards) and HIV/AIDS (20 cards) (See Annex 16).

6.4.2.Structured Participation

Although PHAST Training methods were used in other parts of Zimbabwe (See Section.5.5.1.), the Community Health Club intervention grounded the participatory training in a much more structured schedule. This was done, not only by the formation of Community Health Clubs and weekly meetings, but also more importantly by the use of a *membership card* which gave a focus to the health promotion (See p.108, 5.5; Fig 6 & 7). An EHT was trained for each ward, (an area comprising 6-8 extended villages), and was expected to facilitate the minimum of 5 Health Clubs every six months. The EHT training was done in a five-day workshop, which was also attended by the Councillor for each ward to ensure that community leaders also understood the proposed intervention and would mobilise their community. All 30 EHTs who have used the participatory approach in Community Health Clubs have reported that that it enhanced their job satisfaction and enabled them to achieve a high standard of intervention as the training material provided an interest for the community (See 6.1.3). The phrase *'supermarket approach'* was coined to describe the way all health promotion duties could be done at the Health Club meeting like a 'one-stop shop' rather than the EHT having to arrange with many individuals to carry out his /her duty. They also reported being clear about their health promotion objectives. All EHTs completed their training of Health Club members, and many have taken on additional duties not normally organised by EHTs as they have become attached to the clubs above the call of duty.

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[27] developed/ illustrated by J.Waterkeyn, Zimbabwe A..E.A.D; pre-tested MoH Makoni District (funded by WaterAid)

Fig 12. Participatory Activities in Community Health Clubs

6.5. STAKEHOLDER ANALYSIS

A stakeholder is defined as someone who may have something to lose or gain and so is affected by the existence of the intervention to some degree, if only marginally. *Key* stakeholders are those who are critical to the intervention and without whom the intervention may suffer. A stakeholder analysis (after the method of Reed & Skinner, 1998) was done on each group of stakeholders at four levels, (National, District, Ward and Village), to clarify the dynamics of implementation of the Community Health Club Model.

6.5.1. Key stakeholders at National Level

At National level the key stakeholders are the National Action Committee (NAC) and its sub-committee, the National Co-ordinating Unit (NCU) which co-ordinates all programmes in the Water and Sanitation Sector, deciding which districts are to be allocated to NGOs and approving programmes to be implemented. In addition, the funding Agency and the implementing NGO are of course, critical and the most influential stakeholders at National level.

6.5.2. Key Stakeholders at District Level

At District Level the following key government stakeholders are involved:

- District Administrator (DA) who approves the programme;
- Rural District Council (RDC) administers most programmes in all sectors headed by the Chief Executive Officer (CEO);

- Ministry of Health which implements health promotion and sanitation programmes and small scale water programmes, represented by the District Environmental Health Officer (DEHO);
- District Development Fund (DDF), responsible for routine operation and maintenance of all water supplies.

At this level the NGO maintained an office with a Project Officer to work with the RDC, and implement the programme as a partner with MoH and DDF. The successful relationship between these stakeholders at district level is the key factor determining the success of an intervention (DFID, 2001). The involvement of these stakeholders varies considerably in each District. In Makoni District, the NGO was the leading NGO in the district after ten years and was given full administrative authority by the RDC, who were passive partners. The MoH was highly motivated and identified itself entirely with the programme, and continued to operate the Community Health Club Model after direct support had been stopped. In Tsholotsho, the RDC administered the programme, and the MOH was largely passive, except in the field where EHTs implemented the programme supervised directly by RDC. The NGO had a strong identity in the three wards were it worked in the district, taking over many of the duties of the DDF which was largely defunct.

6.5.3. Key Stakeholders at Ward Level

At Ward level the key controlling gate-keeper is the politically appointed Councillor and influential local leaders include the traditional village elders, including Chiefs, and village headmen, school headmasters and teachers, religious leaders, traditional healers and birth attendants and government extension workers. The local clinic/health centre (of which there is usually one in every ward) is the key health resource and the levels of service available are important for the programme, as is the dedication of the nurses and the EHT stationed there. In both districts the involvement of key stakeholders was considered exceptionally high (Chiwandire, 2000; Muringamza, 2002). In Makoni District, the Councillors were trained with the EHTs and became key mobilisers contributing to the success of the programme by lending their support. In addition, in Makoni District, from 2002, the NGO has supported semi-voluntary Ward Co-ordinators, who have been trained in all aspects of the four stages of the CHC Model to oversee and report on all CHC activities on a monthly basis to the NGO.

6.5.4. Key Stakeholders at Village Level

At village level the key government semi-voluntary stakeholder is the Village Community Worker (VCW) who is known as a *'multi-disiciplinary cadre'* as she helps

mobilise communities for programmes from all ministries. The VCW is usually a woman, and has the respect of the community, so that her identification with the programme at an early stage is crucial. She is trained by the EHT to stand in for him/her at Health Club sessions in case of absence. The VCWs have been a strong motivational aspect of the programme and have enabled CHCs to continue after external financial support has been withdrawn. The key stakeholders are obviously the club members themselves represented by their executive committee. The elected Chairperson, Treasurer, and Secretary in each club is important for the continued viability of each club. The committee is crucial in maintaining the CHCs. The Kraal Head, (the elder of a small hamlet) is a key opinion leader at this level and preferably both he and his wife should be active in the local Health Club.

6.6. SANITATION ISSUES

As noted above (See p.83, Section 4.5.3) Zimbabwe has always supported a subsidy for the construction of Ventilated and Improved Pit (VIP) latrines, known in Zimbabwe as Blair Latrines (See Fig. 13. below). The MoH Policy throughout Zimbabwe was that a household which had lined their pit up to ground level with their own resources, was supplied with three bags of cement, to be used for the slab and the superstructure, including the vent-pipe, an wash hand facility (See Fig. 123). However as the brick superstructure of a standard Government-design Blair Latrine is often far grander than the owner's living accommodation, the rationale of this policy has been questioned. In recognition of this, the Rural District Council in Tsholotsho approved a low-cost design (Fig 13, below right) to encourage communities to supply their own superstructure whilst the subsurface component was subsidised instead (Mpofu, 2001)

Fig. 13. *Makoni District, (2001)*
MoH standard Blair latrine model
with built in hand washing facility

Tsholotsho District, (2001)
Mud and pole Ventilated Latrine with
free standing hand washing facility

In this arid area, loose Kalahari sands meant that latrine pits had to be lined to prevent collapse. A cost effective technology was piloted by the NGO, enabling women to make interlocking cement blocks locally (See Fig 14, below), and line their own latrine pit without technical assistance or the cost of a paid builder. The community responded well to this strategy and over 1,200 latrines were built in eighteen months (See Section 6.2.2) the highest number being built in Ruombwe Ward (265), Nyamidzi ward (122), and Dumbamwe (155). Hand washing facilities, instead of being built into the wall of the latrine, were designed as cement tubes with lids, and the production of them became an income generation project within the CHCs (See Fig. 12 and Fig.13 above)

In Makoni District the method was different. The Executive Committee of each Health Club had full responsibility for monitoring latrine construction of the members. They supervised the digging of pits, and the lining of latrines. Each member had to make their own bricks, and buy one bag of cement themselves to line the pit. As soon as twenty members were ready with pits lined to ground level, the NGO would deliver cement to the Health Club, who would supervise distribution of the three cement bags per family for the slab, and superstructure to be built. All builders' fees were borne by the family. It should be noted that the Ministry of Health supported this community supervision of latrine construction as it minimised monitoring, empowered the community, promoted a sense of ownership and responsibility so that latrines would be maintained, and enabled the sanitation campaign to go to scale. The ready adoption of 'cat sanitation' by Health Club members in this intervention has demonstrated an alternative way to achieve safe sanitation at minimal cost. The concept of sanitation being a progressive 'ladder' rather than a direct jump from no sanitation to a Blair Latrine is new thinking in Zimbabwe, where previously only Blair latrines were counted as a real sanitation (See Section 4.5.3).

Fig 14: Sanitation in Tsholtosho (2001)
Women build latrines themselves having made their own interlocking cement blocks used to line the pit

Fig 15. Illustration of a Badza Stand
A stand for a hoe and hand washing facility (Training material, ZimAHEAD) initiated by the Tsholotsho health clubs as an overt sign of cat sanitation practice

Using the 'sanitation ladder' approach, people progress in stages from open defecation, to cat sanitation as a first stage before construction of a latrine. This was a new approach. The visual aids used in this training illustrate this process of achieving sanitation consciousness (See Annex 16; page 16). Burial of excreta breaks the faecal-oral transmission route just as effectively as a latrine and constitutes the first stage of sanitation consciousness. Without any material subsidy, this practice allows almost 100% safe sanitation without the expense of latrine construction. With time the community understanding of the need for safe sanitation may be expected to lead to latrine construction if resources allow. In the interim, an adequately sanitary environment is maintained at no cost. The *badza* stand is an innovation produced by Health Club members wanting to demonstrate their use of cat sanitation publically. It is a wooden stand, made out of a forked branch which holds a *badza* (a hoe), and often incorporates a plastic container for water and soap for handwashing (See Fig. 15 above). This is placed in a prominent position in the compound so that people visiting the bush to defecate can dig a hole and cover their faeces, without the difficulty of looking for a hoe or requesting the use of one from the host.

6.7. MONITORING HEALTH PROMOTION

Within the Ministry of Health there had been minimal supervision of the Environmental Health Technicians (EHTs) on the ground. The EHTs are usually stationed at remote clinics with no transport, very few guidelines and no clear structure to their work. This monitoring system for EHTs was first field tested in this intervention to evaluate its potential for measurable self-evaluation and community monitoring. This was done by the triangulation of three main monitoring tools:

- Records kept by each Community Health Club executive committee
- Membership Cards held by each Health Club Member
- Monthly Claim Form submitted to Ministry of Health District office by EHTs

6.7.1. Health Club Records

Planning for sanitation and water implementation was done with the help of a map of the village embroidered on a cotton banner, showing all water and sanitation facilities and other infrastructure. Health Clubs have established executive committees, who monitor all members' attendance of sessions, levels of behaviour change, and members' achievements in terms of the practical recommendations. In some areas the clubs are taking responsibility for the collection of statistics on the health of the local population as well as early warning of cholera outbreaks; in addition in a few wards CHC members have been trained to monitor weight gain of all babies in the area. This

is supervised by the local Health Centre and contributes to relieving the pressure on these facilities. Health Clubs assist Ward Co-ordinators to keep monthly records of people living with HIV/AIDS, orphans, widows, elderly and disabled (See Annex. 4) and help arrange community support for those in need. Thus many of the responsibilities previously carried by the EHT and Clinic staff have been devolved to the community (Chiwandire, 2000).

6.7.2. The Membership Cards

The Membership Card (See p. 108, Section 5.5. Fig. 6 and 7) serves three purposes:

- a sense of identity to the Health Club member
- a means of planning the programme for the members themselves;
- a two-way monitoring between the EHT and the members.

Monitoring is built into this intervention in terms of quantifying attendance at health sessions and training supplied by EHT. For a member to gain a certificate, they have to have attended all 20 sessions. To verify this, the EHT has to sign the member's card each time a session is attended. The number of dedicated members can be accurately quantified as the number who attend all theory sessions and gain a certificate of full attendance. The number of members who gain this certificate are also recorded by the club secretary. It is surmised that the public recognition and prestige of gaining a certificate has been the main factor influencing members to attend every session, and this has put pressure on the EHT to hold all sessions as planned.

6.7.3.The Claim Form

The club Chairperson is required to verify the number of people attending each session and sign the Claim Form for the EHT to be able to access his/her monthly allowance. A copy of the Claim Form is sent to the MoH, NGO and RDC each month to verify progress achieved, and ensure transparency. Cross-checking can be done by the District Ministry of Health Supervisor or NGO Project Officer carrying out spot-checks at the club to verify that signatures and dates on the Membership Cards correlate with the EHT's Monthly Claim Form. The EHT also has his own card for each club which the CHC chairperson has to sign to show his attendance. This 'mutual monitoring system' greatly empowers the community (Mathew and Mukuwe, 1999), and also tends to make EHTs dedicated to their jobs.

6.8. COSTING-OUT HEALTH PROMOTION

Public health practitioners have to make hard choices about how to make best use of scarce resources. Interventions of high priority should be those that address a public health problem that has major consequences and both have demonstrated effectiveness against the condition and are cost effective in comparison with other uses of the money (Curtis, 2001).

In order to encourage donor support for health promotion, this study sought to quantify the amount of health training. Careful monthly records were kept. Expenditure on health promotion training had a separate budget line from other costs for 'hardware' inputs such as latrine construction, so exact figures could be calculated for health promotion apart from other expenditure. The following figures are extracted from NGO project records, monitored by the author, and audited each year. Only Makoni records have been used as in this ward all administration was done by the NGO, whilst in Tsholotsho the RDC was responsible and precise figures are difficult to abstract.

6.8.1. Total Project Costs for two years:

The total project cost for one year (2000) with 68,700 beneficiaries was US$120,000, of which 20% was spent on health promotion, 40% on sanitation, 30% on income generation projects and 10% on administration of the NGO. (Zimbabwe A.H.EA.D. Report 2001) (See Table 14) (for comparative cost-effectiveness studies, see Section 2.6.4.)

In the first year, cost per beneficiary is estimated to be US$0.91 including capital costs of which the major expenditure is the 14 motorcycles, and preliminary training. Without major capital expenditure in the second year, costs diminished to only US$ 0.35 per beneficiary because they are divided by a far larger membership (See Table 14).

Table 16. *Percentage of Total Budget Costs and Cost per Beneficiary, Makoni District, 2000*

Budget Line	US$ Cost	% of Budget	Beneficiaries Direct	Indirect**	US$ Cost Beneficiary
Health Prom.	24,395	20%	11,450	68,700	.35
Sanitation	47,709	40%	3,128	18,768	2.54
IG projects	36,878	30%	5,000*	30,000	1.22
NGO Admin.	10,242	10%.	10	60	170.7
Total	120,000	100%	19,588	117,528	.97

* estimated at 10 per IG Group

** Indirect beneficiaries are members of family to benefit (taken as 6 per member)

When this budget is calculated as a cost ***per trainer***, (including training, equipment, motorbike and running costs) it amounts to only US$3,144 for two years (See Table 15).

6.8.3. Hidden Costs

The figures below (See Table. 15) represent only the marginal cost to the provider (NGO/donor) and do not take into account costs to other stakeholders such as:

- Cost to the Ministry of Health (salaries of 14 EHT's and VCW's).
- Voluntary time given by Health Club Committees, Members, Councillors
- Costs accrued by each household in buying new items recommended
- The cost of developing specific visual aids (See 6.3.1 above)

Table 17. *Cost of two years of health promotion in Makoni District: March 1999 – March 2001*

Makoni District	1999	2000	Total
# Wards	20	20	20
# EHTs operative	14	15	15
# Health Clubs	72	265	265
# Club Members	3,856	11,450	11,450
# Beneficiaries	23,136	68,700	68,700
# Health Sessions	1,448	2,283	3,731

Health Promotion Costs	US$	US$	US$
Total EHT costs	7,990	21,811	29,801
Training costs	4,065	2,179	6,244
M/Bike capital cost	9,210	nil	9,210
CHC running costs	nil	405	405
TOTAL COST	**21,265**	**24,395**	**45,660**

Cost Analysis	US$	US$	US $
Health Ed. cost per Member	5.51	2.13	3.98
Cost per Beneficiary	**0.91**	**0.35**	**0.66**
Cost per Trainer	**1,518**	**1,626**	**3,044**

As the exact financial cost is known to be US$ 21,265; the number of health promotion sessions are 3,731 and direct beneficiaries (11,450) can be calculated from project records, the cost per beneficiary is calculated by dividing one by the other. Measuring the degree and effectiveness of behaviour change within the Health Club membership is reported in Chapter 8 and Chapter 9.

6.9. INSTITUTIONALISATION OF COMMUNITY HEALTH CLUBS IN MAKONI DISTRICT

When funding ended in March 2001, the NGO withdrew from the health promotion campaign, handing over assets (such as the 14 motor bikes) to the Ministry of Health. EHTs continued to conduct health sessions particularly in the 10 'new' wards that had only been in operation since 1999. The Ministry of Health supported half the EHT

running costs in the District and was assisted with other half by a partner NGO[28]. All of the twenty clubs that were sampled (See p.179, Section 9.1) continued to meet regularly, even if formal health sessions run by the Ministry of Health have been completed. Meetings are run by the club Chairperson and Ward Co-ordinator, and focus on health issues in the area, report any public health risks like cholera outbreaks or malaria breeding sites, continue to monitor hygiene practices in the area and organise home-based care for those in need.

In the ten 'old' wards[29] where clubs had been active since 1995, the health promotion stage had covered over 80% of the population and had moved to the next three stages (See Section 5.8.). From 2001 the HIV/AIDS training for home based care (Stage 4) and the rehabilitation of boreholes still involved the Ministry of Health's Environmental Health Technicians in the Health Clubs but the adult literacy training and sustainable livelihoods activities (Stage 3) were outside their mandate.

6.10. STAGE THREE: SUSTAINABLE LIVELIHOODS

After the formal health promotion intervention ended in 2001 there was no further support of Health Clubs in Tsholotsho by the NGO. However, in Makoni District, numerous (Stage Three) activities in the clubs continued, facilitated and monitored by the NGO. Between 2000 and 2003, members who had graduated[30] attended a PRA[31] workshop for Stage 3, (See Section) which was held in each of the ten old wards, and approximately 500 of the old clubs attended. Members were asked to identify their needs and resources as well as plan activities, ensuring they were sustainable with minimal external support. Each group then raised their own start-up funds, opened a bank account, elected a committee and wrote a constitution outlining basic rules of the operation and maintenance of the group. Once this was done the members were then trained in some type of skill, and appropriate basic equipment (e.g. an oil press) was donated by the NGO. In Ruombwe ward, a Community Training Centre had been established for making handmade paper, oil, soap, peanut butter, and mosquito nets, as well as making wire fencing, wooden and clay bee hives and other equipment such as protective clothing for bee keeping and bee smokers from recycled tin. In Ruombwe Ward[32] over 100 people were involved in a major paper making project which in the year 2000 brought in an income of US$ 6,540 (Z$ 50: US$1) (See Annex 2).

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[28] Riders for Health Organisation had originally had been subcontracted by Zimbabwe AHEAD Organisation to manage the fleet of motor bikes and they continued some support when the NGO withdrew.
[29] 'old' clubs or wards refers to those ten wards which were the first to have Community Health Clubs between 1995 and 1999 before the intervention scaled up to the next 11 wards (See Section 6.1)
[30] Those who had successfully completed 20 sessions and had been awarded a certificate in public graduation ceremonies
[31] PRA: Participatory Rural Appraisal, a method of facilitating community to identify and prioritise needs
[32] Number of households in Ruombwe ward was 2,24 in 2004. Each ward has an average of 2,000 households (6 per h/hold)

Within the ten wards, 518 income-generating groups involving 5,052 people raised US$ US$ 44,304 from sales in the year 2000. Although this was an encouraging effort for the first year, when averaged out as an income per person it amounted to only US$85 per group although this should be seen in context of the minimal wage, which was less than US$0.50 per day at that time. Clearly, time is needed to establish a regular flow of raw materials and markets and to increase productivity. The hand made paper raised an average of US$77 per person, but this was affected by the national fuel shortage, and some paper makers found employment with the buyer in Harare, which undermined the CHC attempts to create local employment (See Annex 2). The most viable income generating activities are those where the raw materials available locally and the market is within the same area, as transport remains the biggest obstacle to trading. Locally sold products such as oil, peanut butter, dried vegetables and herbs, fresh vegetables and honey continue to be produced and sold at a low level, earning pin money for the members, who appear to have benefited from their sales, as recounted in the interviews (See p.196, Section 9.1.2.6). The market for honey and dried herbs in the capital, is considerable and is beginning to show substantial returns. The main constraint has been the lack of fuel and a collapsing economy in Zimbabwe generally.

In 2001, ten Health Clubs in Dumbamwe and Sangano Wards decided to build their own new Community Training Centre. This took four years, and by 2005 there was a large hall and skills training block, and market stalls for their produce and accommodation for thirty participants, which generates further income from rental. The Community Health Club members provided all the bricks, thatching grass, sand, and half the cost of labour; with external[33] assistance for the other half of labour costs, cement, and brought items.

It is important to stress that in this four year period there was only minimal support from the NGO at grass root level[34]. Once training was complete, the clubs were fully responsible and were expected to sustain their own activities, although the association with the NGO provided surety to raise funds more effectively. In 2002, over 200 clubs secured start up funds of around US$ 650 from a Government revolving fund. The NGO also trained ten local co-ordinators from the community for each ward to monitor and encourage income generating groups and other activities, and report back to the NGO once a month. From 2002 onwards no material subsidies have been given by the NGO.

[33] New Zealand High Commission through Zimbabwe A.H.E.A.D Organisation
[34] Due to severe lack of funding only two project officers covered the whole district

6.11. STAGE FOUR: SOCIAL DEVELOPMENT

Most of the 500 clubs in Makoni District went on to Stage 4: Social Development (See p. 127, Section 6.2.3.) in which three other main activities were initiated.

6.11.1. Adult Literacy Training

It was estimated by the NGO that literacy amongst women was at 60% in Makoni District and there was a strong demand for literacy classes from the club members. In 2002, two adult literacy tutors were trained for each of the ten old wards to run literacy lessons in each of the Health Clubs in the ward, and they continue to hold classes on a weekly basis in most clubs. Members pay for their own training and no outside assistance is given at present. Each year women take national exams and many have succeeded in learning to read and write whilst others have learnt English and have taken 'O' level exams. It is not known how many people are currently involved in literacy classes at present but from the interviews it would appear that this activity still continues in many areas.

6.11.2. Caring for the vulnerable

During 2002 and 2003, one person from most clubs was trained in home-based care to monitor HIV/AIDS within their village and train those who needed support. Over 3,000 patients were registered in this way (See Annex. 4) including 376 bed-bound, 555 housebound and 2,121 mobile clients, in a population of 129,100. There were also 7,859 widows, and orphans registered; using an average of six per household, this is estimated to be 36% of the number of households within the ten wards.

6.11.3. Nutrition gardens, herbs and bee keeping

A programme using medicinal herbs for curing opportunistic diseases was started in 2003. All home based carers were trained how to propagate and use herbs and within six months they were using up to 40 varies of medicinal herbs (See Annex 3). Herbal remedies are appealing as they can be prepared within the home without cost, and have a strong resonance with local Shona culture, which, before Western medicine was available, used to rely on homeopathic treatment through traditional healers, using local herbs (listed in Annex 3.1.). Traditional healers are still routinely consulted as an additional resource to the Health Centre, therefore those who were trained in the use of herbs were given respect as herbalists and regularly consulted by neighbours (See p. 207, Section 9.1.4)

HIV patients were taught to have a well-balanced diet to build up their immune systems. To enable the family to sustain their livelihoods in the event of the death of a breadwinner, families were trained to cultivate organic nutrition and herb gardens using labour-saving drip irrigation systems, and to produce honey for sale and consumption. Within six months there were 4,005 individual nutrition gardens started in eight wards, as well as 131 communal gardens for the benefit of vulnerable families. It was calculated by the ward co-ordinators who kept detailed records (See Annex 3.1.) and reported monthly to the NGO that by November 2004 there were 54,732 herb seedlings of twenty varieties propagated throughout Makoni District. Selling fresh and dried vegetables and herbs had become a major business in 4,136 homes of which 400 were those affected by AIDS. In sixteen wards, 821 people had been trained and sales for the first quarter amounted to US$3,183[35] for over 4,000 families[36]. Although this is calculated at less than US$ 1.00 per family there was high expectation of future profits and considerable energy was invested despite the minimal financial profit within the first few months. The growing demand for medicinal remedies (See Section 9.1.4) from the herbs caused a rapid expansion of the programme within Makoni District with many enquiries from other areas to train other NGOs in the process. Much of this activity was substantiated in the individual interviews.

By November 2004, 1,015 people had been trained in bee keeping with 195 also trained in business skills. After six months of the programme there were 1,364 members with 6,872 hives, of which 4,075 had been colonised by bees. There were 1,918 people already producing honey and of a total number of 3,205 people living with AIDS (PLWAs), 195 people were selling honey after six months of bee keeping[37] (See Annex 2.2.).

A Bee Promoter in every ward assists with the setting up a communal nutrition garden in each village, around a borehole maintained by the Health Club. This follows the traditional 'chief's plot' cultivated by all villagers to provide for the old, infirm disabled and visitors to the area. In the modern context it will be used to assist families affected by HIV/AIDS.

A programme for *Ambuya* (Grandmother) assistance is now being set up in Health Clubs, to provide a play school for toddlers alongside the nutrition garden to assist grandmothers, many of whom are caring for many of their deceased children's offspring with minimal resources. In the survey conducted for this study it was found that 21% of the members in Makoni were widows in 2000 (See p. 161, Section 8.1, Table 21), and

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[35] (Z$54,183,205) In 2000 the RoE was Z$50 to US$1; by November 2004 there was approximately Z$ 17,000 to US$1.
[36] A loaf of bread at this time cost approximately Z$ 4,000 (US$0.23) but inflation was over 300%.
[37] The figures for nutrition, beekeeping and herbs are taken from the Third Quarterly Report submitted in Nov 2004 by Zimbabwe A..H.E.A.D. to the Funding Agency LEAD (USAID) (See Annex 2.2).

the interviews conducted in 2004, resonate with the social problems caused by the high death-rate of breadwinners (See Section 5.4). Lack of income has become the major difficulty in the rural areas and a major determinant of the health status of the family.

6.11.4.Empowerment and employment

As outlined in Chapter 4, Zimbabwe has had the most challenging five years since Independence in 1980. During this period there has been continual drought, with much of the country having to rely on food aid; hyper-inflation often at over 300%, and 70% unemployment nationwide, due to land redistribution and the collapse of the agricultural sector (See p.79, Section 4.4.4).

The clubs have provided a platform for many women, who were unknown when they joined, to become key figures in the community, either as members of the executive committees, or as trainers, literacy tutors or home based carers. Some have become district trainers, teaching Health Club members such skills as making bee hives with clay pots, or sewing bee veils, for the bee keeping projects. One such trainer had previously been marginalized due to his disability. He is a severely handicapped tinsmith (See Fig.16 below) but has achieved respect in the community as well as being able to support his mother by making smokers for bee keepers.

The empowerment of women can be attained through the Health Clubs on a large scale. The many positions of responsibility provide such opportunities for recognition and service to the community: the twenty ward co-ordinators, twenty ward bee promoters countless chairwomen, secretaries and treasurers of Health Clubs, the many women trained in literacy, home based care (See Fig. 17), home craft and how to prevent disease through good hygiene, and two women who have become Ward Counsellors as a result of their effective leadership.

Fig. 16. *Empowering the disabled: The District Beekeeper Trainer and the District Tinsmith Trainer*

Fig 17. *A home based Carer with one of her clients, who claims her treatment of herbs has given him a new lease of life.*

The Community Health Club Model should provide this avenue for personal progress and self-efficacy, building capacity in different fields, and enhancing human resources to sustain livelihoods, enabling the facilitating agency to exit leaving a competent community in place.

CHAPTER 7. THE STUDY

This chapter describes the methods used in the study that was undertaken to evaluate this Community Health Club intervention as follows:

Section 7.1. introduces the main purpose of the study which was completed in two main stages.

Section 7.2. focuses on Stage 1: Quantitative data collection, documenting how the selection of districts, sampling procedure and data analysis was done in Tsholotsho and Makoni Districts in 2001.

Section 7.3. focuses on Stage 2: Qualitative data collection, explaining the process of the pair-wise ranking exercise and how the interviews were conducted in Makoni District in 2004.

Section 7.4. addresses all the issues of objectivity and bias that arose in the course of both Stage 1 and Stage 2.

Section 7.5. explains some of the constraints of the data collection at a time of political instability

Section 7.6. highlights the triangulation of different methods of qualitative and quantitative data collection.

7.1. THE PURPOSE

The social mechanisms at work within Community Health Clubs are the core interest of this thesis, which seeks a better understanding of human motivation and of how to achieve behaviour change in semi-literate, rural communities, particularly in Africa. Although it was evident that the Community Health Clubs attracted consistently large attendance and field staff reported strong indications of positive behaviour change as a result of this programme, these findings were anecdotal and had not been properly researched.

Therefore this study was conceived as a rigorous evaluation of the Community Health Club Strategy in order to measure its effectiveness in achieving hygiene behaviour change. Its aim is to ascertain whether this approach is capable of achieving a cost-effective hygiene promotion intervention, which will positively enhance family health and the standard of living of the beneficiaries over the long term. It also seeks to understand how best to involve women in health promotion in order to improve their standard of home hygiene.

In view of the paucity of rigorous information on levels of hygiene behaviour change it attempts to meet the criteria for a rigorous study (Loevinsohn, 1990) (See Table 2). In an effort to strengthen these findings we provide quantitative and qualitative data and triangulate in terms of data source as well as data collection methods (Nutbeam, 1998).

This four-year intervention study was completed in two stages, the collection and analysis of *quantitative* data between 2001 to 2002, and the *qualitative* investigation and analysis 2003 to 2005).

7.2. STAGE 1: QUANTITATIVE DATA COLLECTION

Our main objective is to ascertain the cost-effectiveness of the intervention and to do this we measure *quantitatively* whether Community Health Club members did in fact:

1. Improve their health knowledge
2. Improve their home hygiene practices
3. Sustain positive behaviour change

Effectiveness was measured in terms of observable indicators of behaviour change rather than a health outcome, given the unreliability of health outcomes for operational evaluation (Cairncross 1990). With substantial evidence in the literature for the impact

of clean water, sanitation and good hygiene practices on diarrhoeal and other diseases (Feachem 1984; Esrey *et al.* 1991; Curtis & Cairncross 2003), proxy indicators of safe practices were used to quantify effectiveness. Costs per club member are converted into costs per beneficiary on the assumption that the health of the entire family of the member (taken as an average of 6 per household) will benefit from the hygiene improvements of the member, particularly if, as the mother, she controls hygiene standards within the home. However costs are also presented per household for comparison where other studies used this measure (See Section 5.7), and costs per trainer have also been calculated to enable scaling up costs to be calculated more easily (See p.137, Section 6.8).

7.2.1. Purposive Selection of Districts

It was decided for this study to represent the findings from the two districts of Makoni and Tsholotsho as they represented a strong contrast: a Shona area from the East in a highly favoured area of the country where there had been numerous water and sanitation projects and an Ndebele area from the West of Zimbabwe from one of the most underdeveloped areas, where this was the first project of its kind. An added interest was that the scale of the intervention was at the two extremes: Makoni had 350 Health Clubs with 14 EHTs, whilst Tsholotsho only 32 Health Clubs run by 3 EHTs. As we are interested to find out if there are optimal conditions for this methodology to flourish we felt that these two areas, both implemented by the same organisation, would provide the strongest comparison, without unnecessary confounders. Sampling of respondents was done in three stages as follows.

7.2.1.1. Random Sampling: Selection of Health Clubs

A random sample was taken of twenty five clubs from each District. The NGO's register of Health Clubs in both Makoni and Tsholotsho Districts was used as a sampling frame, and every tenth club from 250 clubs in Makoni was chosen whilst making sure that there was at least one club from every ward (See Annex 1). As there are only thirty two Health Clubs in Tsholotsho at least seven were selected from each of the three wards by draw, and the balance of four were drawn randomly again to make twenty five.

7.2.1.2. Cluster Sampling of Health Club members.

Each Community Health Club has a register of all members held by the Chairperson, which was used as the sampling frame, from which 15 members were sampled. Three 'host' members from each club were selected (the 10^{th}, 20^{th} and 30^{th} member on the

register) and each visited on a specified day. To minimize travel time and expense, cluster sampling was used at the next stage. During the same day four Health Club neighbours within walking distance of the 'host' were visited without warning.

Although this should have resulted in exactly 375 members per district, in Tsholotsho this was reduced to 354 members : 21 respondents' answers were in a bag that was stolen. In Makoni there were seven extra members making 382 members : the extra respondents had been interviewed to train research assistants.

7.2.1.3.Control Groups

The wards for the control groups for each district were purposively selected, with the assistance of the Ministry of Health, to match the intervention area with regard to demography, cultural practices, levels of sanitation and water coverage. The control group had no Health Clubs in the area and was geographically as far removed as possible from the Health Club operation (typically 30-50km away) to ensure it was largely unaffected by diffusion of Health Club ideas.

In control areas, no adequate sampling frame existed, as there was no equivalent to the Health Club register. Therefore, a list of households was made by the headman or councillor in each village and every *n*th member was selected as a respondent. In the case of Tsholotsho where homesteads are often along a road, every *n*th was chosen along the road to ensure random sampling.

7.2.2.Spot Observation of Proxy Indicators of Hygiene Behaviour

A baseline household survey that had been used in Tsholotsho and Makoni in 1997 and 1998 was adapted for the study. It included a structured questionnaire to ascertain factual demography, and spot observation of observable indicators, as well as questions to ascertain the level of health knowledge of each respondent (See Annex 12b). Each home visit took approximately an hour to complete. All compliance indicators were ascertained by informal observation; the respondent recorded nothing purely on mere report of good practice. For example, open faecal disposal was observed by a 'health walk' (around the bush immediately surrounding each home) to check for unburied faeces. The latrine was inspected by a natural request to use this facility. A child in the home was asked to assist demonstrated hand washing. If a hand washing facility was present it was only recorded as used if there was water inside, and the ground below was damp, or had a pot plant beneath that was obviously well watered (a method of evaluation instigated in the clubs). Similarly a request for a drink of water would demonstrate whether a ladle was used to draw water and whether the

container was well covered. If young children could point out their own cups, it was taken that the family had 'individual cups'. Pot racks were obviously in use if pots were still lying on the pot rack; rubbish pits were deemed 'well managed' if there were signs of regular burning, and there were signs of separation of bio-degradable compost. Thus observed demonstration, preferably by children, or visible evidence on the ground rather than householders' reporting was the method used to ascertain adherence.

7.2.3. Semi Structured Interview on Health Knowledge

Members in Community Health Clubs have been taught the transmission cycles, symptoms and prevention of the following diseases: malaria, bilharzia, intestinal worms, skin diseases (scabies and ring worm) diarrhoea, TB and HIV/AIDS (See membership cards, p.108, Fig. 6). In addition members should know about immunisation by being able to explain their baby's Road to Health card and should also be able to demonstrate making Oral Redyration Solution (Sugar Salt Solution) correctly. To establish the member's knowledge on disease, the enumerator asked the respondent to elaborate on three aspects of each disease: the transmission cycle, the symptoms and the prevention. If all three aspects could be accurately identified the respondent scored three points (good); if only two aspects could be identified correctly they scored two points (fair) and if only one aspect or no aspects could be identified the score was one (poor) (See Annex 7). As it was decided that a fair knowledge was as dangerous as poor knowledge, only those who had all three aspects correct and had been classified as 'good' were counted as having 'health knowledge' in the findings that were subsequently presented (See Annex 7). It is for this reason that all results for health knowledge are as rigorous as possible. This high level of knowledge should also be considered when comparisons are made to other studies, which may have counted respondents who had only minimal knowledge.

7.2.4. Focus Group Discussion

When the preliminary findings from the quantitative data were found to be quite different in Makoni compared to Tsholotsho District, there was an interest to seek explanations from those who knew their own areas, and discuss possible reasons for the difference. Accordingly, a Focus Group Discussion was held with Ministry of Health staff from both districts to seek explanations for this difference based on various hypotheses that the author put forward (See Annex 8). Other aspects were also discussed and these have been included in the report whenever explanations have been sought for anomalies in the findings.

7.2.5. The Schedule for Stage 1 Data Collection

One week was taken to survey each Health Club and the following schedule was followed (See. Table. 16. below). On the 1st day of the week, the Health Club was called for a meeting and the objectives of the research explained to allay any fears of political association. The Executive Committee of the Health Club produced the register of Health Club members, and a random selection of the hosts was made as described above (See Section 7.2.1). The committee was also asked to collect the group data of the Health Club, and this included the full inventory of facilities of all the members of the club in terms of number of latrines constructed, the number of hand washing facilities, pot racks, rubbish pits etc. This data was to be completed by the end of the week, when the club was to meet again for feed back from the research. The enumerator would accompany the first host respondent selected and conduct the first observation that evening. To interview the rest of the cluster the enumerator would camp nearby ready for the four interviews the next day. On the 2nd and 3rd day the enumerator visited the two other hosts and their four neighbours. On the 5th day the enumerator met the whole club again and gave feed back of general observations to encourage the members. The group statistics were collected from the executive committee and a history of the club was written. In addition during the week the enumerator was asked to interview one person to add richness to the data. This was not randomly sampled and those interviewed tended to be exceptionally interesting cases. Finally a group pair-wise ranking exercise was done with the whole group as described below (See Section 7.3.3).

Table 18: Schedule of weekly data collection in each Community Health Club.

Data Type	Respondent	Mon	Tues	Wed	Thur	Fri	Total
Health Walk (Struct. Obs)	Household Head	1	4	5	5		15
Structured Questionnaire	Household Head	1	4	5	5		15
Health Knowledge Interview	Household Head	1	4	5	5		15
Pair Wise Ranking	CHC Members					1	1
Individual Case Study	1 member of CHC					1	1
Group CHC Data	CHC Exe.Committe					1	1
Club History	Chairperson of CHC					1	1

7.2.6. Analysis of Data

Quantitative data for individual home surveys were analysed using 2x2 tables (cross tabulation) with SPSS and Epi Info Computer programmes. The chi-square test (and where appropriate Fisher's exact test) was used to calculate significance levels, and p values have been included with all statistical results. The club statistics and club history

have not yet been fully analysed but have been useful for the NGO and Health Clubs, and can be used for longitudinal studies in future. The first round of individual interviews done in 2001 (Stage 1) were lacking sufficient detail and although were interesting anecdotal material, it was felt they were not sufficiently well recorded to be used in this study. As neither the individual interviews nor the Pair Wise Ranking exercises were observed by the researcher (nor recorded for verification) and were lacking standardised format, these outputs from Stage 1 were abandoned. Twenty interviews were done in 2004 (Stage 2), this time fully supervised by the author and with improved design (See Section 7.3.1 below). Content analysis of interviews was done without assistance of any computer programme, by colour coding manually, as shown in Appendix 13.

7.3. STAGE 2: QUALITATIVE DATA.

7.3.1. Selection of District

To assess the sustainability of the Community Health Clubs, the 2nd stage of the study took place three years later in April 2004. Makoni District was purposefully selected for the collection of the qualitative data, as it is the only one of the three districts to continue to be monitored by the NGO, and to have completed all four stages of the A.H.E.A.D Model (See p.116, Section. 5.9, Fig. 8). Gutu and Tsholotsho only completed two years of health promotion and water and sanitation activities, whilst for the past five years Makoni has continued with Stage 3 and 4: income generation and social development projects. These extensive activities would provide the necessary variety of initiatives to find out which of the activities had best served the community and whether the needs of the members had been met within the clubs. To do this the classification the Hierarchy of Needs (Maslow, 1954) was used as a basic typology for categorical assessment.

7.3.2. Selection of Health Club

One club was selected randomly from each of seven wards in Makoni District as follows in Table 19 below.

Table 19: Health Clubs selected randomly for interviews and group evaluation

Date of Interview	Ward	Club name	Respondent #	Tape #
26 1.2004	Ruombwe	Rujeko	1 -3	1
27.1.2004	Mutanda 1	Nyadzonya	4 - 6	2
28.1.2004	Nyamidzi	Chinowawa	7 -9	3
30.1.2004	Dumbamwe	Chenisai	10-12	4
2.2.2004	Tikwiri	Zvatakananga	13 - 15	5

3.2.2004	Tanda	Tongogara	16 -18	6
4.2.2004	Weya	Mupfuti	19-20	7

Community Health Club members, were gathered through the NGO's Ward Co-ordinator and the Health Club Chairperson. Attendance varied from 50 – 100 at each of the seven sites. Members were asked to participate in helping to evaluate their own activities by two different means: a pair-wise ranking participatory exercise for the whole group, and three individual interviews per Health Club.

7.3.3. Community Pair-wise Ranking Exercise

The pair-wise ranking exercise is a well-tried participatory group exercise used in community self-evaluation (Chambers, 1983). A field test was done in the training to ensure that the exercise was appropriate, and two health promotion officers were trained as per standard instructions (Annex. 10.). In groups of approximately ten people, the members discussed ways in which the Health Club had affected their lives, and wrote ten suggestions on pieces of card. After half an hour of group discussion, all the suggestions were read out to the plenary and discussed before being allocated by the group to one of the following of Maslow's categories (See Table. 18, first column, below)

Table 20: *Maslow's (1954) categories of Needs with local interpretation and symbols assigned*

MASLOW'S CATEGORY	THE NEED	LOCAL INTERPRETATION	SYMBOL ASSIGNED
Self Actualisation	to **Improve oneself**	good mother / better wife; self improvement	A scarf
Aesthetic	to be **Smart**	home improvement/ improved public self image; being smart	A flower
Cognitive	for **Knowledge**	learn / understand; being knowledgeable	A piece of paper
Esteem	for **Respect**	from friends, family, husband; being respected	A stick
Belonging	for **Common Unity**	socialisation, getting together; common unity / club support	A bunch of leaves
Safety	for **Security**	Good health / safety net / income generating projects; sense of financial security	A rock
Physiological	for **Survival**	Water, sanitation, hygiene, basic comforts, disease protection, medical care	A shoe

Each category was explained carefully as interpreted in the second column in Table 20; to enable easier recall of the categories, visual aids were selected from available

material picked up locally. For example to symbolise 'belonging' a bunch of leaves was put on the appropriate square, and a shoe symbolised something that protected one from disease (clean water, good sanitation).

Fig 18: Design of pair wise matrix drawn on the ground, Makoni 2005.

	1. Scarf	2. Flower	3. Paper	5. Stick	6. Leaves	7. Rock	8. Shoe
1. Scarf	X	X	X	X	X	X	X
2. Flower		X	X	X	X	X	X
3. Paper			X	X	X	X	X
4. Stick				X	X	X	X
5. Leaves					X	X	X
6. Rock						X	X
7. Shoe							X

A large (3 x 3 metre) matrix with eight squares on each side, was drawn on the ground and all the participants arranged themselves around the edges. The symbols were placed in a line, one in each square along the x-axis and y-axis, (See Fig. 19, above). Squares that compared the same symbol were blocked out, by drawing a cross.

The members were carefully tested on their interpretation of each symbol to ensure everyone had understood the categories. The facilitator then compared each of the pair of 'Needs' in turn, starting at the top (Square 1 on the x-axis : Square 1. on the y-axis), and moving down each row. He asked the participants to shout out together as a group which of each pair had been more important to them in the Health Clubs. (e.g. 'Scarf compared to Flower': 'Self Improvement compared to Being Smart'). The symbol, which was selected most loudly by the group was noted by placing the appropriate symbol in the square. If there was doubt as to which was the most popular of the pair, a debate was encouraged between participants and then a vote was taken by show of hands. When all the pairs had been compared, the group was then asked to confirm if they were in agreement with the results. A member of the community then counted the total of each symbol, and they were ranked according to popularity. A copy of the matrix was made on paper. These were compiled and assessed (Annex 11).

To ensure consistency of interpretation, the ten pair-wise exercises were done by the same two facilitators. Throughout the language used both in the exercise as well as the

groups' handwritten suggestions was Shona. The suggestions were collected and translated into English and the results of the matrix were also collated in English.

7.3.4. Individual Interviews

Whilst the Pair-wise Ranking Activity continued, three people from each club were purposively selected. In each club, members were divided into three age groups: those under forty, those in their forties and fifties, and those of sixty and above. Each age group numbered themselves and the medium number was chosen. Although random sampling was attempted by this method, the public selection of only three respondents from each club proved difficult as members themselves interfered with the process (See Section 7.4. below).

The twenty in-depth interviews were done to investigate the clubs' sustainability and help verify claims of activities that were ongoing and to understand the attraction of the Health Clubs, and why members had stayed with them for so long (between 5-9 years).

The main interest of the questionnaire was to:

1. Investigate the group dynamics that take place in the Community Health Clubs.
2. Analyse the socio-psychological appeal of the Community Health Clubs
3. To assess the sustainability of the Community Health Clubs

Learning from the mistakes of the 1st stage of data collection, the interviews in 2004 were standardised to a structured questionnaire (See Annex 12) although it was decided to allow open ended responses and to provide prompts to encourage a natural conversation. The project staff (Programme Co-ordinator and Project Officer) conducted the interviews. One person interviewed the respondent and tape recorded the interview. The other interpreted into English for researcher who was present at all interviews (except three), acting as a silent observer, although probing for clarification if necessary.

Respondents were interviewed on their own, at a distance from the group, each interview taking twenty to forty minutes. The interviews were all conducted in Shona, with simultaneous translation into English, and tape recorded in *situ*. The standard of the recording was acceptable although in two cases half an interview was lost due to technical error. The interviews were fully transcribed by the researcher into English and the original tape recordings are available for verification. (See Annex 12. for the questionnaire).

7.4. OBJECTIVITY AND POSSIBLE SOURCES OF BIAS

7.4.1. Author's Objectivity

The need to maintain objectivity has been a constant challenge. As the reader will have surmised from the above, the author has been the main progenitor of this initiative and therefore is in a weak position to produce an unbiased assessment, given her involvement from the initial concept to the present. However, it is usual in the 'true' sciences for those who research an issue to have personal theories that they hope to prove, and it is accepted that this personal bias can be controlled by clear hypotheses which must stand the test of empirical experimentation. This study should be seen as a *social* experiment which has been brewing for ten years, carefully monitored throughout this time by the author. The reader is therefore asked to have forbearance if there are instances where the text lapses into a less impartial note due to the enthusiasm for the findings, although every effort has been made to avoid this by presenting statistical findings and direct quotations whilst minimising conjecture.

Analysis of data may be affected by the fact that as the initiator of the project, it would be expected that the author would try to identify positive aspects and bias interpretation. To guard against personal bias in selection of quotations, there has been no editing of any of the answers, which are quoted in full for each question (See Annex 13). All quotes can be checked and understood in context with other answers, and verification of categories has been made clearer by the coding which has been included with keys. The interviews should speak for themselves, which is the main strength of using a qualitative research method. All tape recordings of interviews, statistical data and project records are available for verification.

7.4.2. Sampling Bias

Although the sampling for the qualitative data is dealt with in detail in Section 7.3, it should be mentioned that the selection of only three respondents from each of the seven clubs was difficult as members themselves interfered with the selection process. In each club, members were divided into three age groups: those under 40, those in their 40's and 50's, and those of 60 and above. Each group numbered themselves and the medium number was chosen. When making selections for the interviews at the club gatherings. It soon became clear that the people who had been originally selected randomly within three age brackets, did not always come forward for the interview as

planned. There was a high proportion of office bearers, who obviously felt it was their prerogative to speak for the club, particularly as only a few people had been selected. Although this presented a problem in terms of random selection, these members were accepted as key informants, given that they could give more informed answers. An adjustment to balance this 'community selection' was made by ensuring that at least half the respondents were ordinary members without a leadership role in their club.

7.4.3. Gender Bias

As regards gender bias in the sampling of respondents, it may be asked why only one out of the twenty respondents in the interviews were male. However this seemed representative of gender balance in the clubs, as in most clubs at least 80% of members are women, so women were in fact, the main target group in the research.

In Stage 1, female interviewers would have been more suitable due to their better rapport when interviewing other women. However, as it was unsafe for women to camp out in the villages due to political insecurity in 2001, all interviewers had to be male.

7.4.4. Translations and Missed Questions

The recordings were translated verbatim simultaneously, and were clearly audible. The simultaneous translation appeared to be accurate as in most cases the interviewer was translated by a second person. However, it would seem that some phrases were repeatedly used, indicating that the translator tended to speak in his/her own customary way using sophisticated vocabulary such as '*mentally stimulated*' (See p.181, Section 9.1.1.2). Although there has been no back translation to check for accuracy, all transcripts and tapes are available for spot verification. One of the main problems was that in each interview, some of the questions were missed out in error. On average there were only sixteen responses for each question asked, as in most cases four respondents were not given the question.

7.4.5. Interviewer Bias

The quantitative field research in Stage 1, was conducted by impartial research assistants who had not been previously associated with the programme. However in Stage 2, due to the lack of dedicated funding for this research, the NGO contributed its own project officers as interviewers. The advantage of this was that access to the community was easily gained without special permission, which otherwise would have been denied due to political suspicion of foreigners in Zimbabwe at the time of research

(January 2004). All interviews and translations were done by the senior project staff of the NGO, and this may have introduced interviewer bias. However, with a team of three people monitoring all responses, it is to be hoped that any interviewer or translation bias has been minimised by cross checking.

As a stranger to the area, the author may have biased the answers of those interviewed who may be trying to impress a foreigner, in order to attract more inputs (as was noted in the requests at the end of the interview). There is the usual problem with self-reporting as culturally in Zimbabwe, there is a strong tendency to please to strangers, with respondents seeking to provide the desired response rather than provide objective fact (See p.75, Section 4.2.4). However given the above reservations, the interviews have produced a consistent pattern, which would indicate that a genuine picture of the intervention has been represented. The author was present as an observer in all but three interviews, to challenge any exaggerations or probe for clarity.

A community evaluation using participatory pair-wise ranking is an experimental approach and may be prone to interviewer bias as it is fairly easy when categorising the suggestions for the facilitator to lead the crowd in a pre-emptive direction. It may be that the first stage of the exercise (when community suggestions are collected without prior explanation from the facilitator), is a more accurate depiction of the true data than when the suggestions are ranked through pair-wise selection. In addition as it is a quantitative assessment of a qualitative process, it may not provide accurate data. And the results are merely the *perceived* needs rather than the *real* needs of the sample population. However, in sociological terms it may provide pointers as to what is considered important in the community, and whether these perceived needs have been met to some extent by the activities in the Health Clubs. It is useful in terms of triangulation for adding richness to the data collected in the interviews. Whilst it is not strong evidence on its own, it is nonetheless, a group confirmation of many of the individual comments that were recorded in the interviews.

7.5. ETHICAL DISCLAIMER

All respondents agreed to participate in the survey, and during the household survey complete anonymity was observed in the data collection and analysis. Those interviewed did so with the understanding that this would enable wider understanding of the intervention and were agreeable to the results being made public. Most of those who were interviewed wanted to be photographed and recorded and there were no objections to the NGO storing and using these records for publicity, and all were proud to have been able to show off their achievements. In many cases there were requested to conduct regular surveys to mobilise more interest and attract more external support

for Community health club projects. Non club members were not interviewed individually as it was difficult have gain access to their areas.

7.6. CONSTRAINTS IN DATA COLLECTION

The collection of data in 2001 coincided with massive social insecurity in the rural areas of Zimbabwe and political intimidation. The facilitators found it difficult to move in some areas, particularly in the control areas where the intervention was unknown and they were suspected of being covert opposition supporters. Much time was spent getting official travel permission to operate. In addition husbands who are not used to Health Club activities are not disposed to allow unknown people to interview their wives, whereas in Health Club areas there is a general understanding that any activities associated with the Health Club are welcomed.

Transport was initially a constraint until the enumerators were supplied with bicycles. They also found it difficult to stay with the 'hosts' on many occasions, and so were provided with camping equipment to allow them to be independent. Although initially there were four enumerators this was reduced to two due to financial constraints. There was also a chronic fuel shortage for most of the year, making public transport unreliable.

The control group consisted of a total of 113 respondents in Makoni and 59 in Tsholotsho. It had been planned to have 150 in each area, but as the field work was one month before elections it was impossible to continue, owing to widespread intimidation in both areas. It was also clear that the control groups had started to show a strong pattern and additional respondents may not have added enough to justify the risk to the enumerators.

7.7. TRIANGULATION

The data have been collected by using a range of methods: household observation, individual interviews, group self evaluation, project records and clinic statistics. It is to be hoped that triangulation will provide a balanced picture of the intervention with the qualitative descriptive accounts of the interviews enriching the quantitative results of spot observations in the homes.

CHAPTER 8: QUANTITATIVE RESULTS

This Chapter presents the quantitative findings from the Household Survey in Makoni and Tsholotsho Districts that was carried out between September 2000 and March 2001.

Section 8.1. begins with a description of the respondents comparing the demography of 736 Community Health Club (CHC) members with 172 respondents from the control groups in both Makoni and Tsholotsho Districts.

Section 8.2. presents the findings of levels of good health knowledge on nine different topics, six of which are preventable diseases. Comparison is made (with highly significant p values) of the CHC Members with the control groups in both Tsholotsho and Makoni Districts

Section 8.3. presents the findings (with highly significant p values) from the spot observations in the homesteads visited, comparing CHC homesteads to control group's homesteads in terms of the cleanliness of the yards, whether there were rubbish pits and pot racks and levels of maintenance, as well as whether there was a nutrition garden grown by the family. Types of water supply used by each family and what kind of sanitation was practised were also noted.

Section 8.4. outlines the hand washing practises of CHC Members in both districts compared to the control group: the method used, whether there was a hand washing facility in the home and whether soap was available.

Section 8.5. describes kitchen hygiene of CHC members in both districts based on observations of practises including how drinking water is taken and stored, whether a ladle is used and habits related to eating, such as sharing food in a communal dish.

Section 8.6. summarizes the above quantitative findings in Makoni and Tsholotsho district, surmising why there is such a variation between the two areas.

Section 8.7. correlates levels of health knowledge with good practice finding that 79% of those that had good practise in a mean of six indicators also had good knowledge.

8.1. DEMOGRAPHY OF THE CONTROL AND COMMUNITY HEALTH CLUB RESPONDENTS

The characteristics of the CHC members and the control groups sampled in both districts are shown in Table 21. below. In Tsholotsho 22% more women than men were interviewed in the CHC group compared to the control and 10% more women than men in Makoni. The age range of women was similar with controls and CHCs in both districts having an average age of between 43 and 47 years old. In terms of marriage status the control and CHCs were well matched in both districts, with less than 5% difference. The proportion of widows in Tsholotsho is similar in both groups but there was a marked difference in Makoni where 21% of those interviewed in CHCs were widowed whilst there were only 6% widows in the control. In Tsholotsho 22% more respondents in the Health Clubs were from female headed families, whilst in Makoni there was almost the same proportion in both groups. In Makoni 16% more Health Club members were joint breadwinners, whilst in Tsholotsho there were only 7% more. Only 4% of the Health Club members relied totally on their husbands wages, whereas the control had 19%, and in Tsholotsho there was only 9% more in the Health Clubs. Members and controls are well matched in each district in terms of religion but interestingly there was almost twice the proportion of conventional Christians in Makoni (71:67%) than in Tsholotsho (44:34%). There are 46% Apostolic in both groups in Tsholotsho and a close match 25%:23% in Makoni. Educational level for both groups in both districts is almost exactly matched with 40:42% in Tsholotsho and 34:30% in Makoni for primary schooling. However whilst 12% of respondents from both control and CHCs in Tsholotsho have been to primary school, in Makoni there are 12% more control respondents with secondary schooling and this may have confounded findings slightly.

The sample shows that in Tsholotsho average income of the CHC sample and control groups was similar at US$298 and US$ 225 per annum. In Makoni income was higher in the CHCs at US$378, but in the control in Makoni it is higher still at US$602 per annum. In summary, the control is fairly well matched in Tsholotsho but in the Makoni control the secondary educational level, the income and the number of male-only breadwinners are much higher than the CHC sample. This is unfortunate as these different levels may affect findings and show the Makoni members to be less well-matched with the control group than those of Tsholotsho (Table 21). On the other hand it may suggest that the clubs are successfully recruiting from the poorer and less educated members of rural society, who stand to benefit most from membership.

Table 21: *Samples of Health Club members and control groups in Tsholotsho and Makoni Districts, (2000) comparing main demographic differences*

Survey 2000	TSHOLOTSHO		MAKONI	
	Members n=354	Control n=59	Members n=382	Control n=113
Women respondents	97	75	87	77
Average age of women	43	42	46	47
Respondents married	78	75	76	80
Respondents widowed	14	20	21	6
Female headed h/holds	76	54	55	53
H/hold size 4-6 members	34	24	36	26
Joint breadwinners	15	8	67	51
Male breadwinners only	38	29	4	19
Conventional Christians	44	34	71	67
Apostolic Christians	46	46	25	23
Completed primary school (male & female)	40	42	34	30
Primary & secondary school (male & female)	12	12	23	35
Average cash Income p.a.	US$298	US$225	US$378	US$602

RoE: US$ 35: Z$1 (2000)

8.2. KNOWLEDGE OF PREVENTABLE DISEASES

During a six month period of training it is expected that members become well informed on the symptoms, transmission, cure and prevention of locally common preventable diseases. The following topics were covered: Oral Rehydration Solution (ORS), Child care, diarrhoea, malaria, bilharzia, worms, skin diseases and HIV/AIDS. During the survey, respondents were asked to describe their understanding using pictures that had been used during the training as prompt cards. Whilst in Makoni there were 38% who had completed the course, in Tsholotsho 68% had done more than twenty sessions (See Table 22 below). It is noteworthy that 65% in Tsholotsho and 30% in Makoni had finished their training more than a year before the survey. In Tsholotsho there were 9% and in Makoni 43% of the CHC members who had finished between six months and a year prior to the survey. There were 26% in Tsholotsho and 27% in Makoni who were still in the process of training and therefore may have not covered the topics on which they were being tested in the survey. The full course of training consisted of twenty sessions but the average number of sessions attended by Health Clubs members interviewed was fifteen in Makoni and seventeen in Tsholotsho. Topics will not have

been done in the same order in every club, and it was not known which topics each respondent had done. This omission in the survey questions means that if there is a low level of knowledge it cannot be ascertained if this may have been due to lack of attendance of the topic rather than forgetfulness.

As described above (See p. 149, Section 7.2.3) the method of ascertaining the level of knowledge was rated according to three aspects. Those who knew not only the symptoms but also transmission, and the prevention of each disease were rated as 'good' for that disease. Those who had partial knowledge were rated as fair if they had two aspects correct, and poor if they only had one aspect or less information on that disease. For child care they were asked to explain the immunisation on the 'Road to Health' Cards given to mothers of babies, and to measure knowledge of Oral Rehydration Solution the respondent was asked to physically demonstrate how to make ORS. However of the respondents that had covered 20 sessions or more, 79% had full knowledge of the causes, prevention and cure of diarrhoea, 16% had part knowledge and 5% had poor knowledge in Makoni and Tsholotsho.

Table 22: *Comparative time lapse since CHC training and number of health education (HE) sessions in Makoni and Tsholotsho Districts, (1999-2001).*

Survey 2000	TSHOLOTSHO	MAKONI
	% Members n=354	% Members n=382
More than 20 HE sessions	68	36
HE finished 6mths – 1yr	9	43
HE finished > 1 yr	65	30
HE not yet finished	26	27
TOTAL	100	100

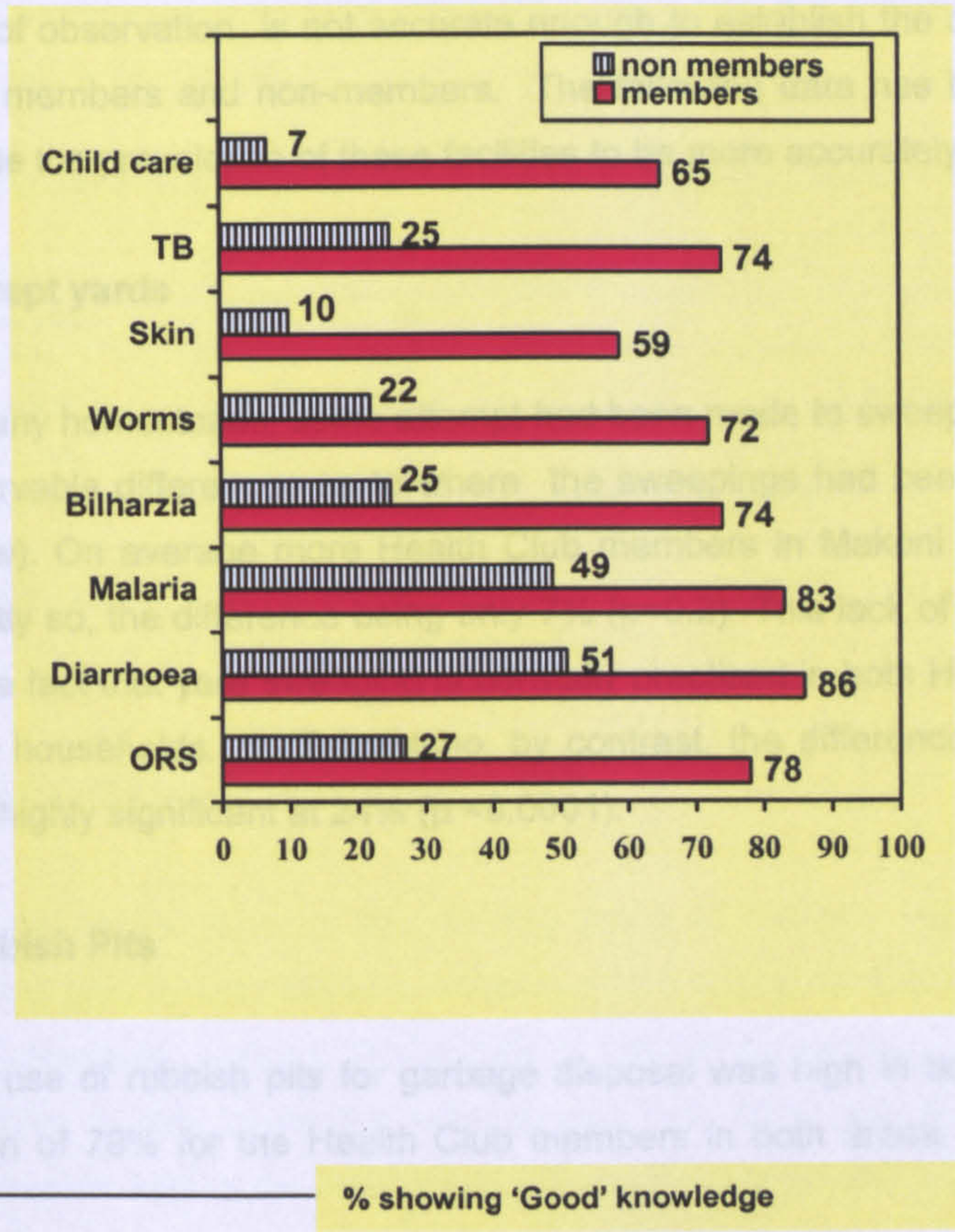
8.2.1. Findings on levels of Health Knowledge

In Tsholotsho the CHC group show significantly higher levels of knowledge than the control group in all nine topics. The difference between the two groups is also *consistently* high, varying from 34% for Malaria (83:49), to 58% for Tuberculosis, with the mean for all nine topics being a 47% difference between groups ($p<0.0001$).

Table 23: *Comparative % 'good' health knowledge between Health Club members and control in Tsholotsho and Makoni District , 2000*

	% MAKONI			% TSHOLOTSHO			% MAKONI & TSHOLOTSHO MEAN			
	CHC %	Control %	p-values	CHC	Control	p-values	% CHC	% Control	% Difference CHC/Control	p-values
	n=382	n=113		n=354	n=59		n= 736	n=175	n=911	
ORS	67	81	n.s.	78	27	<0.0001	73	54	19	<0.0001
Diarrhoea	72	76	0.05	86	51	<0.0001	79	64	15	<0.0001
Malaria	62	47	0.005	83	49	<0.0001	72	48	24	<0.0001
Bilharzia	44	42	n.s.	74	25	<0.0001	59	34	25	<0.0001
Worms	28	26	n.s.	72	22	<0.0001	56	24	32	<0.0001
Skin Dis.	52	35	0.002	59	10	<0.0001	56	22	34	<0.0001
HIV/AIDS	47	35	0.036	74	25	<0.0001	61	30	31	<0.0001
TB	28	19	n.s.	65	7	<0.0001	47	13	34	<0.0001
Child care	64	29	<0.0001	70	19	<0.0001	67	24	43	<0.0001
TOTAL MEAN	**52**	**43**		**73**	**26**		**63**	**35**	**28**	

Fig. 19: *Comparative Levels of % of Good Health Knowledge in Health Club members and control group in Tsholotsho District, (2000).*



In Makoni there is less outstanding indication of the impact of the health sessions; only child care showed a *highly* significant result, with a difference of 35% between the control group and the CHCs. Four other diseases, skin diseases (17%), malaria (15%) and knowledge of HIV/AIDS (12%) and TB (9%) show significant differences. Bilharzia and worms are on the margin of significance and knowledge of how to make ORS and treat diarrhoea are actually higher in the control group.

Taking the two districts together there is a range from 9% mean improvement of health knowledge in Makoni, to 47% in Tsholotsho indicating that the Health Clubs had improved knowledge in this respect in both districts, although to a much lesser degree in Makoni District. As shown in Table 23 when a mean of both districts is taken, the difference between the Health Club members (with an average of sixteen health sessions over six months) as opposed to the control group (with no health sessions) in level of health knowledge is highly significant ($p < 0.0001$) in all nine topics.

8.3. FACILITIES OBSERVED AT HOMESTEADS

8.3.1. General Appearance of Homesteads

It is often possible to identify a Community Health Club home from a distance by a generally orderly compound: a well-maintained latrine, wash-hand facility, pot rack, washing line, fruit trees and fenced nutrition and herb garden. However, this anecdotal type of observation is not accurate enough to establish the difference between Health Club members and non-members. The following data has been carefully sampled to enable the prevalence of these facilities to be more accurately quantified.

8.3.2. Swept yards

In many homesteads, some attempt had been made to sweep the yards, but there were observable differences as to where the sweepings had been dumped (See Table 24, below). On average more Health Club members in Makoni had swept yards but only slightly so, the difference being only 7% ($p=0.2$). This lack of impact could be attributed to the fact that yard sweeping is normally practised in both Health Club and non Health Club households. In Tsholotsho, by contrast, the difference between the two groups was highly significant at 24% ($p <0.0001$).

8.3.3. Rubbish Pits

The use of rubbish pits for garbage disposal was high in both areas with a combined mean of 78% for the Health Club members in both areas, compared to 53% for the

controls. With most other indicators, Tsholotsho had much higher prevalence than Makoni but in this case the general level of the control and CHCs was lower in Tsholotsho, although the difference *between* them is still highly significant at 37%, ($p < 0.0001$), showing that this is a new practice to the area. By contrast even the controls in Makoni were high at 82%, and the CHCs were only 12% higher ($p = 0.0013$) showing that the practice is already established throughout the district (See Table 24. below). The *management* of the rubbish pit is an important factor to consider as this shows the understanding of the rationale behind the practice of removing garbage from the compound. In Tsholotsho this is 30% higher in the CHCs ($p < 0.0001$) and 26% in Makoni ($p = 0.238$), where although the control group do have rubbish pits, they do not separate their rubbish as they do in the Health Clubs, into bio-degradable garbage for making compost and the rest which is burnt regularly.

8.3.4. Pot Racks

The construction of a wooden pot rack made with sticks in the yard for drying utensils in the sun after washing, has long been a recommendation of the Ministry of Health and they are common in most districts of Zimbabwe. The difference in prevalence between CHC members and the control group in Makoni is 12% ($p=0.0002$), whilst in Tsholotsho there was a highly significant 37% (78% versus 41%), which we surmise again reflects the lack of exposure that Tsholotsho has had in the past to standard health promotion messages which were more regularly promoted in Makoni ($p<0.0001$). (See Table 24, below)

Table 24: *Prevalence of yard hygiene indicators in Makoni and Tsholotsho District (2000).*

	Tsholotsho				Makoni			
Observed Hygiene Indicators	**% CHC n=354**	**% control n=59**	**Chi-square**	**p-value**	**% CHC n=382**	**% control n=113**	**Chi-square**	**p-value**
Pot racks	78	41	33.53	<0.0001	94	82	13.56	0.0002
Rubbish pit	64	25	29.64	<0.0001	93	82	10.27	0.0013
Pit well managed	60	29	18.53	<0.0001	55	29	22.15	<0.0001
Swept yard	73	49	23.09	<0.0001	44	37	1.39	0.2385

8.3.5. Nutrition Gardens and Fencing

The difference between the farming areas of Makoni, and the predominantly cattle herding area of Tsholotsho is shown up by the difference in the number of respondents with vegetable gardens. Whilst 89% in Makoni (combining members and control) had gardens, in Tsholotsho the average was only 40%, with 60% in the Health Clubs as opposed to 19% in the control group having gardens ($p<0.0001$).

Table 25: Prevalence of nutrition gardens in Makoni and Tsholotsho District (2000).

Observed Hygiene Indicators	Tsholotsho				Makoni			
	% members	% control	Chi-square	p-value	% members	% control	Chi-square	p-value
	n=354	n=59			n=382	n=113		
Nutrition garden	60	19	32.99	<0.0001	99	80	63.23	<0.0001
Wire fencing	4	0	1.30	<0.0001	10	20	7.80	0.005
Wood fencing	59	19	31.55	<0.0001	39	13	12.57	0.0003
No fencing	10	81	156.4	<0.0001	45	64	11.45	0.0007

Fencing is important as it is usually difficult to protect a garden from livestock without some type of fencing and the cost of wire has been a major constraint. In Tsholotsho which is heavily forested, fencing is commonly made by using thick tree trunks side by side as a solid barrier. This is a major environmental threat as not only are trunks rather than branches used but these have to be replaced every few years due to termite destruction.

8.3.6. Demand for Sanitation

One of the main objectives of the CHC intervention was to create a demand for latrines. This was high, with almost all members supporting the concept of safe sanitation and wanting to construct latrines, the only constraint being lack of financial support. In 18 months (mid 1999 to end of 2000) 1,200 club members in Tsholotsho had built latrines. The design used was an adaptation of the standard Blair (VIP) design promoted by the Ministry of Health (See Section 6.5. Fig 12), using interlocking blocks for lining the pit (See Fig.14) and a traditional superstructure (mud and pole) and vent pipe made of local materials. This enabled women to construct latrines more cheaply because they could line the pits without relying on husbands or paying builders, and were able to construct the superstructure as it was the same building material as their own home (See Section 6.5. Fig13).

Table 26: Prevalence of sanitation indicators in Makoni and Tsholotsho Districts (2000).

Observed Hygiene Indicators	TSHOLOTSHO				MAKONI			
	% CHC	% control			% CHC	% control		
	n=354	n=59	Chi-square	p-value	n=382	n=113	Chi-square	p-value
Faecal free environment	96	2	396.75	<0.0001	88	59	45.48	<0.0001
Cat sanitation	57	0	63.63	<0.0001	14	0	16.14	<0.0001
Family latrine	43	2	32.77	<0.0001	74	57	8.15	0.0035
Latrine built in last year	42	3	31.01	<0.0001	36	4	46.87	<0.0001
Child faeces in yard	4	0	1.69	0.0807	16	23	2.75	0.0972
Used clean latrine	41	2	32.5	<0.0001	38	31	1.8	0.1792

Although Government statistics estimate 16% sanitation coverage in Tsholotsho (NAC, 2000), this research shows the control area had only 2%. The most significant statistic in this study is that in Health Club areas in Tsholotsho an environment free from adult faeces was achieved: 43% constructed latrines with the balance of 57% practising cat sanitation ($p < 0.0001$) (See Table 26). The health walk also showed that all but 96% of CHC members had a faecal-free environment whereas this was only the case in only 2% of the control group ($p < 0.0001$). Virtually all of the latrines had been built in the last year and all except 2% were clean and used ($p = < 0.0001$). There were still difficulties with clearing toddlers faeces as only 4% of CHCs were without children's faeces in the yard, whilst this was common in all the controls without exception ($p = 0.097$).

In Makoni District, government records show sanitation coverage at 24% (NAC,2000), whereas our survey shows the control had already achieved 57% coverage. The intervention project records show that 2,400 standard Blair latrines were built within two years (AHEAD 2000), and the CHC survey found that 38% of those owned by CHC members the 74% latrines had been built within the last year ($p = < 0.0001$), and 38% were clean and used. This was 7% more than in the control area ($p = 0.17$). A faecal free environment was found in 59% of the control area rising to 88% in CHC areas ($p = < 0.0001$), with 14% of the Health Club members practising cat sanitation, whilst none in the control area used this method ($p = < 0.0001$). Children's faeces were observed in the yard of 23% of the control group and 16% in the Health Club areas, showing a 7% improvement as a result of CHC activities. This is less than levels of prevalence of other indicators in this study but still on a par with levels of sanitation measured in other studies[38].

8.3.7. Water Supply

Zimbabwe claims to have provided protected water to rural communities to 99.7% (NAC, 2000. See 4.2.2) and this high level of provision is reflected in the CHC survey although slightly lower than the official figure at 89% coverage (See Table 27).

In Makoni, the water table is fairly shallow, enabling individual households to have their own water sources, usually in the form of protected shallow wells. As these are family water sources in the immediate vicinity of the home, the levels of hygiene rise substantially with the increased access to abundant water nearby. Makoni District is well served and most families have access to safe water. In this sample 79% were using protected water, 38% using a bush pump, and 38% provided with Protected Family Wells. 21% still use unprotected sources of which 18% use water from

[38] marginal success in promoting use of potties improved by 8% and safe disposal of children's faeces in latrine by 4% (Cave and Curtis , 2001) (See Section 2.6.4.)

unprotected traditional wells. No funding was given to Makoni District for water supply in this project because other NGOs in the District were already upgrading family wells. 58% of the sample had access to both safe water and safe sanitation. Only 10% of those with safe water still had unsafe sanitation.

Table 27: *Types of water source used in Makoni and Tsholotsho Districts, 2000 (CHC Household Survey)*

	MAKONI DISTRICT		TSHOLOTSHO		BOTH DISTRICTS
Type of water source	% CHC	: Control	% CHC	: Control	% mean
	n=382	n=113	n = 354	n=59	n=908
Borehole/tap	42	58	96	100	69
Protected spring/well	38	22	0	0	19
Unprotected sources	20	23	4	0	12
TOTAL	**100**	**100**	**100**	**100**	**100**

In Tsholotsho there is no alternative to the deep wells as water levels are deep, and there are no rivers or springs. This makes the community vulnerable if hand-pumps break down or the water table drops substantially, as they have no backup. As shown by the CHC survey above (Table 26) all but 4% the people in both of the Health Club and control areas were reliant on community water sources (some type of hand pump).

8.4. HYGIENE PRACTICES

8.4.1. Hand Washing Practices

The traditional 'common bowl' method, (in which all present before meals washed their hands in the same water offered in a bowl), has been completely taken over by the 'pouring method' of hand washing in the Community Health Clubs, where a jug of water is poured over each person's hands in turn and is then thrown out to prevent cross infection of skin diseases and other infections. In Tsholotsho and Makoni this practice has been well adhered to, and was demonstrated by children in 90% of households visited in Makoni compared to 49% of the control ($p < 0.0001$) and in 91% in Tsholotsho as opposed to 3% of the control ($p < 0.0001$).

8.4.2. Hand Washing Facilities (HWF)

The use of a dedicated 'hand washing facility' (HWF) is becoming more common. This may be in the form of a temporary facility such as a plastic bottle with a home made spout, or a gourd suspended from a tree or post, called a 'Tippy tap'. In Tsholotsho one

of the income-generating projects has been to make concrete Hand Washing Facilities using only half a spade of cement and a bucket for a mould (See p.134, Section 6.5. Fig. 13). A large number of club members, (80%) had made or purchased a Hand Washing Facility, as compared to only 40% of non members (p <0.0001).

Table 28: *Prevalence of hand washing indicators in Makoni and Tsholotsho District, (2000)*

Observed Hygiene Indicators	TSHOLOTSHO				MAKONI			
	% CHC n=354	% control n=59	Chi-square	p-value	% CHC n=382	% control n=113	Chi-square	p-value
HWF owned	80	40	38.84	<0.0001	45	20	11.57	0.0006
HWF in use	74	39	24.85	<0.0001	35	20	8.06	0.0045
HWF + soap	39	20	6.82	0.0093	7	1	92.89	<0.0001
Pouring method	91	3	230.98	<0.0001	90	49	92.89	<0.0001

In Makoni, whenever new VIP latrines are constructed, a permanent cement water container is built into the outside wall of the latrine for the purpose of hand washing. 45% had a HWF of some type, as opposed to 20% in the control (p = 0.0006), of which 62% were temporary and 27% were permanent, built into the latrine (See Section 6.5. Fig. 13.). Whilst this is a recommendation for all members, they may make them for status but not use them. Therefore observations were done to see how many were in use, as indicated by whether they were being topped up with water regularly. It was found that 73% of the tanks did have water (p<0.0001), and only 1% were broken. In some areas members were told to have a pot plant under the HWF and if it was thriving it would indicate it had been watered by continual use of the HWF.

8.4.3. Use of Soap

There was a 19% rise in the use of soap in Tsholotsho (p = 0.0093), although by contrast only 7% of members compared to 1% of the control had soap by the HWF in Makoni (p <0.0001). This may be attributed to affordability, as well as the fact that not enough emphasis was placed on this vital component of hygiene during the Health Club sessions. Women said they stored soap inside the house because soap is sometimes eaten by black kites, goats, cattle and mice and is also wasted by children if it is left out.

8.5. KITCHEN HYGIENE

8.5.1. Taking Drinking Water

One of the main drives in Health Clubs has been to ensure clean water is used for drinking. The 'safe water chain' entails an adherence to a chain of good practices: collection from a safe water source, storage in a clean covered container as well as safe methods of taking drinking water, either by using the 'two cup method' (one for drawing water and one for drinking) or a ladle or long-handled jug. Spot observations were done to see if the water container had a close fitting lid to protect it from contaminated dust and livestock, and the interviewer asked a child for some drinking water. The interviewer observed whether the child knew the procedure of using the ladle (or two cups), and replacing the cover.

Table 29 : *Prevalence of Kitchen Hygiene Indicators in Makoni and Tsholotsho District, (2000)*

	TSHOLOTSHO DISTRICT				MAKONI DISTRICT			
Observed kitchen Hygiene Indicators	**% CHC n=354**	**% control n=59**	**Chi-square**	**p-value**	**% CHC n=382**	**% control n=113**	**Chi-square**	**p-value**
Ladle owned	95	46	110.25	< 0.0001	52	42	3.44	0.0637
Ladle in use	95	30	116.01	<0.0001	45	42	0.29	0.5908
Covered water	96	90	3	0.05062	88	91	0.6	0.4401
Individual cups	97	22	231.96	<0.0001	98	66	99.17	<0.0001
Individual plates	86	10	192.63	<0.0001	97	64	96.75	<0.0001

8.5.2. Covered Drinking Water.

96% of the CHC sample in Tsholotsho and 88% in Makoni had covered their drinking water, whilst 90% of the control had done this in Tsholotsho and 91% in Makoni, showing no significant change. It is surmised that this is already an established practice, which has been reinforced by the Ministry of Health for many years.

8.5.3. Use of Ladles

95% of the members in Tsholotsho had dedicated ladles as against 46% of the control whilst 52% in Makoni had ladles (of which most were in use) as opposed to 42% of the control: thus there was 10% difference in Makoni and 49% difference in Tsholotsho.

8.5.4. Communal Feeding

With the higher incidence of ARIs and spread of tuberculosis, the sharing of cups within the family has been discouraged, and most members know their own personal cups for drinking. Young children in the home were asked to show the enumerator their own cup in order to ascertain if this was common practice in the households visited. 98% of the Health Club respondents did in Tsholotsho and 97% in Makoni did have individual cups for each family member, as opposed to 22% and 66% respectively. This was an important indicator of the affect of CHC teaching as this has not been promoted before by the Ministry of Health or other agencies.

Traditionally the accepted method of serving food has been to place a large mound of *sadza* (stiff maize porridge) on a communal plate in the centre of the group, and for all to take their share in turn according to seniority, using their hands. This has been identified as one of the most obvious causes of germ transmission, particularly where finger nails are long and usually dirty and hand washing is minimal, and seldom with soap. Moreover it often leads to malnutrition of women and children, as there is traditionally a leonine distribution of food whereby traditionally women and children eat the remains after the husband and sons have had their fill.

This practice is being significantly changed by the clubs, as a mean of 92% of Health Club members (98% in Makoni and 86% in Tsholotsho) have demonstrated that they now divide out Sadza into individual bowls instead of onto a communal plate, compared to only 10% in Tsholotsho control and 64% in Makoni.

Furthermore in the group discussions this practice has been taken into the public domain, as members now bring their own plates to events such as funerals, which are now weekly events in every village due to high death rate from AIDS. In the past public feasting was a major cause of the spread of diarrhoea, (and in some cases cholera) as communal food was heaped on large banana leaves for public consumption. Now however individual plates are becoming the norm, and often Health Club members are designated kitchen duties to ensure public health standards are maintained.

8.6. SUMMARY OF INDICATORS OF IMPROVED HYGIENE BEHAVIOUR

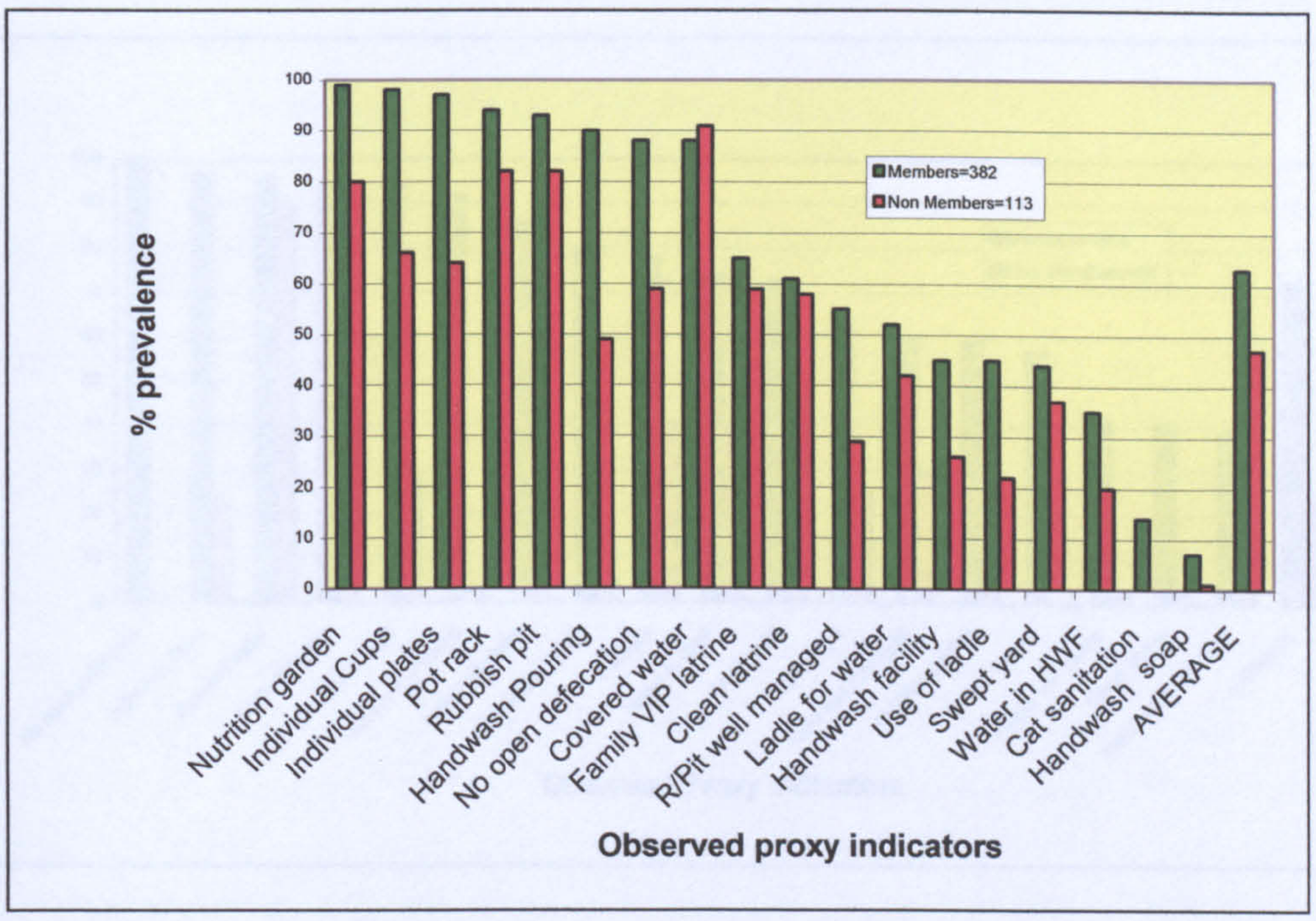
From the wide range of data collected from 736 club members and 172 controls, there were 21 indicators relating to good hygiene prevalence (Table 3). Of these most (except one in Tsholotsho and three in Makoni) showed higher prevalence in the intervention group, with 16 in Tsholotsho and 9 in Makoni having highly significant

differences between club members and controls ($p < 0.001$). Use of 'borehole water' and 'child faeces in yard' was not significantly different in either Tsholotsho or Makoni. 'Covered drinking water' was on the margin of significance in Tsholotsho ($p = 0.0506$). With those exceptions, every other indicator was significantly better in the households of Tsholotsho club members than the non-club control group.

8.6.1. Makoni District

In Makoni on the whole the CHCs were closer to the controls: the CHCs having a mean of 59% and the control a mean of 46% reflecting only a 13% mean difference of prevalence of 21 proxy indicators (Table 3). To some extent the smaller difference in

Fig. 20: *Percentage of Observed Proxy Indicators of Good Hygiene between CHC Members and non-members in Control Group (2000).*



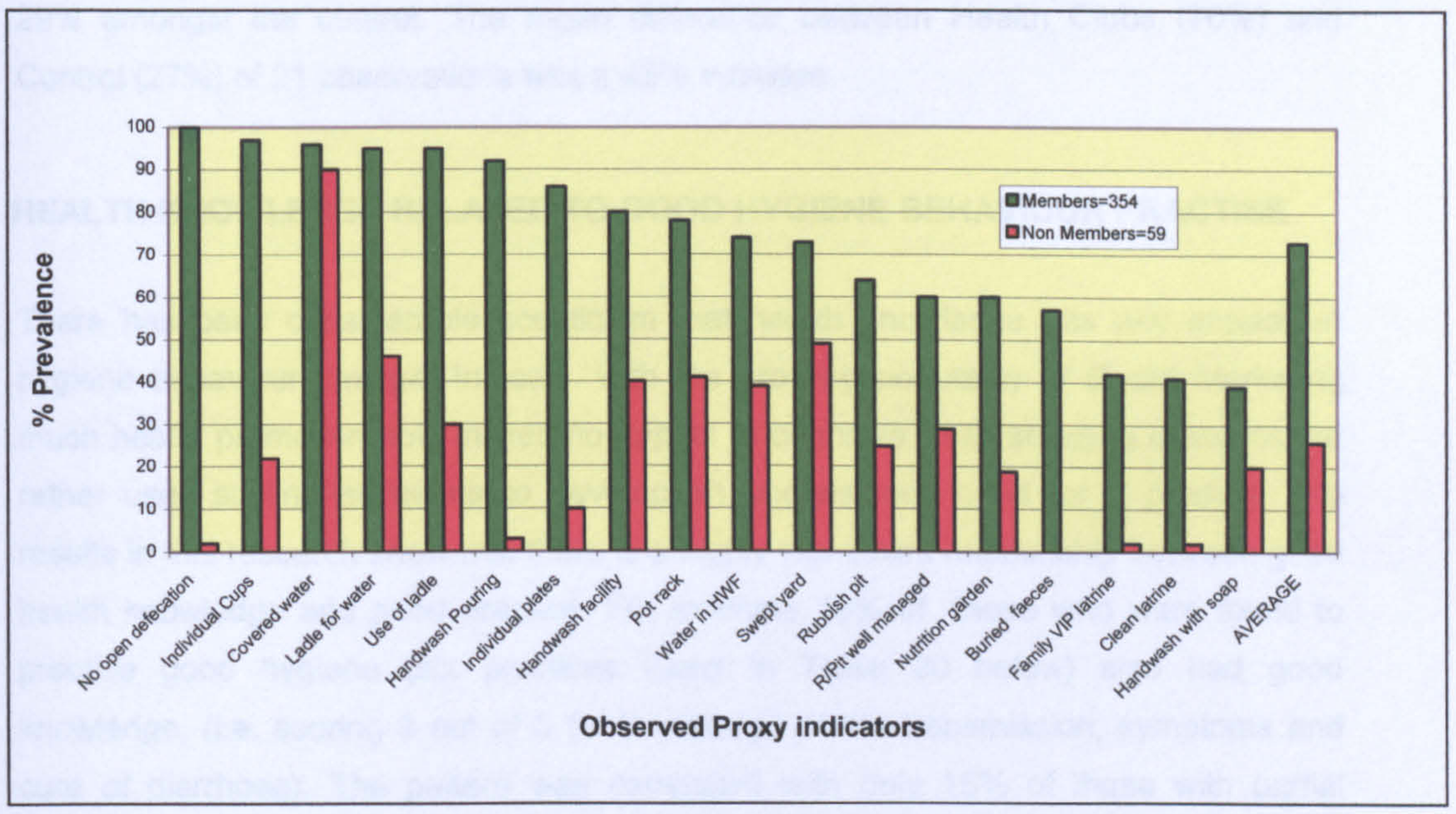
Makoni can be explained because the control group were on average better off and better educated than the CHC members. Although Makoni is considerably lower than Tsholotsho, the results there are still on a par with many of the studies examined in previous reviews (Sayagh & Moseley (1976), Allen et al (1992), Valente et al (1994) (See Chapter 1.12).

However, unlike the studies above, this mean incorporates 21 different practices ranging from 33% (difference in mean for individual plates) to 12% (difference in having pot racks), or 11% (for having a rubbish pit). Looking at which practices showed the most difference we surmised that all the *regular* practices that have been constantly

promoted by the Ministry of Health and other Agencies working in the many water and sanitation programmes in Makoni for the past 20 years, have had an impact. Levels of the control group are not dissimilar to the CHCs indicating that in well known practices the CHC sessions have only impacted between 10% and 20% on the members.

These practises include covering of drinking water (3% less in CHCs), use of ladle (3% more), sweeping of yards (7% more in CHCs), keeping latrines clean (7% more), having a rubbish pit (11% more) and a pot rack (12% more) and pouring method for hand washing (11% more).

Fig. 21: *Prevalence of Hygiene Behaviour Change by observed proxy indicators between CHC members and non-members control group in Tsholotsho (2000)*



However there is a significant improvement when we disaggregate the practices that are *new* in the area, recommended by the AHEAD intervention. This rises to 29% for no open faecal disposal, 32% built latrines in the last year, 25% more hand washing facilities, 19% more nutrition gardens, 26% more of those who have rubbish pits, manage them correctly, in terms of separating garbage and burning regularly. There were some highly significant differences indicated by use of 'individual cups' (32%) 'individual plates' (33%), which are completely novel recommendations showing that the CHC sessions have had a strong impact.

8.6.2. Tsholotsho District

In Tsholotsho, indicators showed particularly high adherence to recommended practices including 'no open faecal disposal' seen in 92% of club members' households compared to 2% in the control, 'individual cups' (97% compared to 22%); 'ladle in use' (95% versus 30%); 'pouring method of hand washing' at (91% versus 3%); 'individual plates' (86% versus 10%), and for 'hand wash facility owned' (80% versus 40%). Smaller, but still highly significant differences between intervention and control are seen in 'pot racks' (78% versus 41%); 'swept yard' (73% versus 49%) and 'rubbish pit owned' (64% versus 25%). Not one person in the control group practised cat sanitation, but the 57% without latrines in the intervention group buried their faeces. Of the 43% who had latrines, most were built in the last year, and all except 2% were found to be used and clean. Soap was found at hand wash facilities of 39% of the members, versus 19% of the control. Importantly, 60% of the members had nutrition gardens as opposed to only 29% amongst the control. The mean difference between Health Clubs (70%) and Control (27%) of 21 observations was a 43% increase.

8.7. HEALTH KNOWLEDGE RELATED TO GOOD HYGIENE BEHAVIOUR PRACTISE

There has been considerable scepticism that health knowledge has any impact on hygiene behaviour change. Instead with the growing popularity of Social Marketing much health promotion now makes no appeal to cognitive understanding of issues but rather uses subliminal means to develop an unconscious need for a product. The results in this research show that there is a highly significant relationship between good health knowledge and good practice. For example 79% of those who were found to practice good hygiene (six practices listed in Table 30 below) also had good knowledge, (i.e. scoring 3 out of 3 for knowledge of the transmission, symptoms and cure of diarrhoea). The pattern was consistent with only 15% of those with partial knowledge having good hygiene in six practices, whilst only 6% with poor knowledge practised good hygiene.

Possible confounders were discounted as it was found that although age had an effect on the level of knowledge, the range was between 63% (70+ yrs) and 85% (20-29 years). Whilst there was a trend for those with less than two years schooling to be less knowledgeable (67%) than those with 'O' levels of which 88% were knowledgeable, both were high percentages (See Annex 7). Neither the number of health sessions nor the time lapse between the end of the health promotion showed much variation between groups. Religion had no significant effect on hygiene behaviour (although there were few Moslems to provide a comparison). Marital status, on the other hand was a factor, probably linked to a younger age combined with a better education. All of

the 14 respondents who had good knowledge, were single, young and had a good education. Although not as high as the youngest group, a highly significant percentage of the remaining age groups had a good knowledge: 76% of the 892 respondents who were married, 81% of those divorced and 71% of those widowed.

Table 30: *Hygiene behaviour related to knowledge levels of diarrhoea transmission in 3 Districts in Zimbabwe, (2000)*

Hygiene Behaviour n = 1,110	% Knowledge levels of Diarrhoea			P-values
	Good	Partial	Poor	
Covered water	**78**	**16**	**6**	**0.006**
Use of Handwash facility	**80**	**16**	**7**	**< 0.0001**
Use of soap/ash handwash	**81**	**15**	**4**	**< 0.0001**
Pouring handwash method	**86**	**10**	**4**	**< 0.0001**
Use of rubbish pit	**76**	**18**	**6**	**0.01**
No child faeces in yard	**74**	**19**	**7**	**0.03**
Mean of 6 practices above	79%	15%	6%	

The findings leave little doubt of the highly significant impact that health knowledge has had on the behaviour patterns of Health Club members. There is however a difference in levels of health knowledge and hygiene behaviour in the different districts, which needs explanation. In the next chapter the discussions with Ministry of Health staff and the community interviews may provide some insight into how this strategy achieved these results.

CHAPTER 9: QUALITATIVE RESULTS

The Qualitative Data was collected in ten old wards of Makoni District 2004, and consists of twenty interviews of Community Health Club members, and ten pair-wise ranking community exercises.

Section 9.1. describes the respondents. Analysis of the interviews has been done under five main categories (See Table 31 below) which indicates where the quotations can be found in full in Annex 13 as well as the interview questions.

Table: 31. *Reference for Categories of Analysis of the Interviews with Reference to the Section Number, the Interview Question Number and the Annex Number.*

Section Number	Category of content analysis	Question Number	Annex Number
9.1.1.	Profile of respondents		13.1.1
	1. CLUB		
9.1.1.1.	Reasons for joining clubs	Q.17.	13.1.1.
9.1.1.2.	Attendance at sessions	Q.20.	13.1.2.
9.1.1.3.	Attraction of the clubs	Q.16.	13.1.3.
9.1.1.4.	Perception of gain from Health Clubs	Q.41.	13.1.4.
9.1.1.5.	Expectations met	Q.40.	13.1.5.
9.1.1.6	Future commitment	Q.42./43	13.1.6.
9.1.1.7.	Recommendation of club	Q.32.	13.1.7.
9.1.1.8.	Sustainability of club	Q.29.	13.1.8.
9.1.1.9.	Voluntary statements	Q.44.	13.1.9.
	2. SELF		
9.1.2.1	Main value for self	Q.14	13.2.1.
9.1.2.2.	Self Improvement	Q.15.	13.2.2.
9.1.2.3.	Value of reputation	Q.34	13.2.3.
9.1.2.4.	Value of respect	Q.25	13.2.4.
9.1.2.5.	Comparative rural: urban lifestyle	Q.19.	13.2.5.
9.1.2.6.	Self reliance	Q.18./39	13.2.6.
	3. FAMILY		
9.1.3.1.	Changes in husband	Q.21	13.3.1.
9.1.3.2.	Changes in children	Q.22	13.3.2.
9.1.3.3.	Changes with in-laws	Q.23.	13.3.3.
	4. HEALTH	.	
9.1.4.1.	Disease prevention	Q.6	13.4.1.
9.1.4.2.	Application of hygiene knowledge	Q.34/35	13.4.2.
9.1.4.3.	HIV/AIDS involvement	Q.37/ 38	13.4.3.
	5. NEIBOURHOOD		
9.1.5.1.	Changes with friends	Q.24	13.5.1.
9.1.5.2.	Differences members: non-members	Q.26	13.5.2.
9.1.5.3.	Type of friendship	Q.27/28	13.5.3.
9.1.5.4.	Social Support	Q.30.	13.5.4.
9.1.5.5.	Reasons for not joining	Q.31.	13.5.5.

Section 9.2. describes the pair-wise ranking matrix results

9.2.1. ranks the suggestions made by the Health Club members under the seven main headings of Maslow's (1954) Hierarchy of Needs.

9.2.2. shows how the pair-wise ranking exercise was performed and how the findings were deduced.

9.2.3. presents findings from the matrix pair-wise ranking exercises

9.2.4. matches the results showing that Safety, Cognition and Belonging were ranked as most important for Community Health Club members in both halves of the exercise.

9.2.5. discusses the finer details of how results may have been confounded although the overall pattern was found to be consistent

9.2.6. alters the classic order of the Maslow's Hierarchy to reflect the findings of the most salient needs in the Community Health Clubs

Section 9.3. concludes with a discussion on possible sources of bias and draws attention to themes to be fully explored in the final discussion (Chapter 10).

To provide authentic material, extracts from the interviews have been quoted (shown in italics) wherever appropriate rather than second hand description. This should provide a flavour of the intervention to counterbalance qualitative external assessment reported in Chapter 8.

N.B. Bold font has been used to enable the reader to identify the main categories used for content analysis. The content of the all interviews were analysed and colour coded to enable ideas to be grouped under five categories and can be verified in Annex 13.

9.1. PROFILE OF COMMUNITY HEALTH CLUB MEMBERS INTERVIEWED

Only one out of twenty respondents was male. Average age of respondents was 47.5 years, with five under forty, the youngest being twenty seven years old. The level of education was high and all had been to primary school: six respondents had done 1-4 years primary school, six had 5-7 years primary (Std 2-4, Grade 2-4), three had done ZJC (2-3 years sec. school), five had been to four years of secondary school and completed 'O' levels examinations. Nineteen were or had been married, but at the time of interview four women were widows, ten were with husbands living at home, and five had husbands who lived mainly in town. All were caring for children at home, with the average number of 5 children, ranging from one to eight children. Four respondents were also caring for orphans of their extended family (See Annex 13.1.1.).

All twenty respondents had completed the full twenty sessions of the health promotion programme. All had been members of their club for over four years: one member had been a founder member in 1995, three joined in 1996, seven in 1997, four in 1998, four in 1999 and only one in the year 2000. They had all been exposed to all five dimensions of the programme (health promotion, sanitation, income generation, literacy and the HIV/AIDS carer programme). Eighteen were currently involved in income generating projects; eleven out of twenty were involved in the AIDS carer programme: one as client, four as care givers, two as trainers, two with orphan care and one a volunteer (See Annex 13.1.1).

Ten were ordinary members of the club; of the other ten members who were all office bearers; two are ward coordinators, three were treasurers, one secretary, two vice secretaries, one is also the chairlady in the umbrella committee of all the clubs for the ward, and one also has a part time job as a nutrition coordinator. All women were unknown as community leaders before the Health Clubs started (See Annex 13.1.1.).

9.1.1. MEMBERS' PERCEPTIONS OF THEIR COMMUNITY HEALTH CLUB

This is the first of five categories in this section on the members' perception of their own Health Club and how and why they are still affiliated. It is divided into nine main categories of content analysis (See Table 31 above).

9.1.1.1. Reasons for joining

In order to understand the motivational attraction of the Health Club, respondents were asked to explain why they originally wanted to join (See Annex 13.1.1.). A wide variety of reasons were given and all gave more than one reason. The most common

response involved the need for **knowledge** with eleven mentions, whilst there were eight mentions of the need for **social interaction,** i.e. to be the same as the others, to interact or to share. Five mentions were made of the need for **health or good hygiene**, diet or nutrition, and four mentioned **self-improvement** of some type. Only three mentioned that they joined for reasons of **material gain**, and none of these gave this reason solely. There were also three mentions of the **need for *change***, as with the improvement of home and living standards.

Table 32. *CHC Members' reasons for joining Health Clubs, Makoni (2004)*

REASONS FOR JOINING	EXAMPLES GIVEN	Number of Responses	% Total Responses
Knowledge	Learn, get knowledge	**11**	30
Social Interaction	Join others, be the same, interact, share	**8**	22
Health	Health, hygiene, diet, nutrition	**5**	13
Self Improvement	Improve self: health, knowledge	**4**	11
Gain	Get something, inputs, support family	**3**	8
Change	Improve home, living standards	**3**	8
Curiosity	What is going to happen, meet there, find out	**3**	8
TOTAL		**37**	100

Pure **curiosity** was also an aspect which was mentioned three times. The following was the most lively response

> *The first thing I wanted to know: 'What is going to happen there?' The second thing I wanted to know. 'Am I going to get something? Am I going to improve my life? What actually am I going to meet there?' Many things .... and then I had to join, and obviously I met all of these missions.* (#4)

9.1.1.2. Attendance at sessions

All respondents had attended twenty sessions or more, which means they completed their membership card and 'graduated' with a certificate of full attendance. When asked why they had attended so many sessions, all of the nineteen enthused about the content of the training in various ways (See Annex 13.1.2). Sixteen referred directly to the **interest** they had in each subjects, twelve mentioning **the variety** was appealing and that as the topics were all different they wanted to know each one, and didn't want to miss out on anything as the sessions were all useful and applicable to their daily life. Two indicated their own **competitiveness**, in that they *'didn't want to remain behind'*,

and some said they wouldn't mind listening to **repeats** as the topics were so interesting. A sixty year old woman, with only two years of primary school said this:

> *...at times I did not attend because of illness or deaths, but I completed my card, and I graduated. Those lessons were very good. We were mentally stimulated so much so that we wanted to know every topic.* (#13)

> ***Observer: Is that what she said, 'mentally stimulated'?***
>
> *Interviewer: Yes, she said her head, her brain, was woken up, you know that means.... stimulated. Brain stimulation.*

Each respondent indicated a strong **love of learning**, curiosity and interest in health issues for their own sake, apart from other aspects of the club that might appeal. Only one respondent (after prompting) also mentioned **a social reason** saying that by meeting other people she could forget her problems. The remaining respondents all said they went there for interest and **knowledge** (See Annex 13.1.2.).

9.1.1.3. Attraction of the clubs

When asked '*What do you enjoy best about the clubs*?' the answers reflected a broader range of interest rather than just for the sake of learning (See Annex 13.1.3.). However, the most common attraction was still **knowledge** mentioned by eleven respondents. They stressed the pleasure they found in learning about diseases, good health, hygiene and farming. There were also ten mentions of some form of **social interaction**, such as sharing ideas, meeting people, socialising, togetherness, mutual encouragement and team spirit. Many clubs in the past five years have started weekly netball games and athletics competitions; six mentioned **sport** as a great joy to them, including a lady of sixty who claimed she is still a very fast runner! Six mentions were also made of the pleasure in **performance:** drama, singing and poems feature regularly in sessions in most clubs, and inter-club competitions arranged annually in some areas.

This love of rapport was mentioned earlier as a cultural expression of the Shona (Kriel, 1971). Contrary to the perception that to villagers are motivated mainly by gain (Mooney, 1975) and to attract a crowd for health education some incentives (such as a free refreshments or T shirts) are necessary, this research found that this was not the main incentive to join. Only four people mentioned that the club helps them to **earn money**, three mentioned **home improvement** for better hygiene, whilst only two mentioned issues of **self-efficacy** such as self pride, achievement and being different from others.

Table 33. Reasons that people are attracted to join Community Health Club, Makoni, (2004)

ATTRACTION OF CHC	EXAMPLES GIVEN	Number of Responses	% Total Responses
Knowledge	Learning about disease, farming, health	11	24
Social Interaction	Sharing ideas, meeting people, socialising, togetherness, mutual encouragement, team	10	23
Competitiveness	Sport, netball, running, athletics	6	13
Performance	Drama, poems, singing	6	13
Self reliance	Earning money, supporting family, IG projects	4	9
Self improvement	Home improvement, improved hygiene, fitness	3	7
Self-efficacy	Self pride, achievement, different from others	2	4
Happiness	Enjoyment, having fun	3	7
TOTAL		**45**	**100**

Respondent 15, quoted below was the only one to stress the need for a bit of **fun** that comes with debate:

> *This knowledge and the discussions we have in the lessons. I enjoy it when you answer questions. You have time to laugh. Have some fun.*' (#15)

9.1.1.4. Perception of gain from Community Health Clubs

When the Health Clubs were initially formed there was a distinct strategy not to arouse expectations of material inputs (such as cement) from joining a Health Club. However in most areas, by the second year there was a subsidised sanitation component, followed in some areas by income generating projects in the third year (See Sustainable Livelihoods, Section 6.8). Therefore the question: '*Do you think you benefited more from the knowledge or the inputs?*' refers to whether more value was placed by the Health Club member on material gain or cognitive improvement. Whilst material gain is always welcomed there was a clear appreciation of knowledge for its own sake (See Annex. 13.1.4.) Four people who had not directly benefited from income generating groups naturally said **knowledge**; four mentioned **only inputs material**; whilst the remaining eight mentioned **both knowledge and inputs** as having been important, as noted by the respondent below.

> *The inputs were also very important because with the knowledge we couldn't go any further. When we got the cement we managed to build our toilet. So I can say both of them, the knowledge and the inputs were very important to us.* (#17)

9.1.1.5. Members' expectations of the Community Health Club

In order to evaluate how satisfied the 'clients' were, the classic 'workshop evaluation' question was put to each respondent: '*Were your expectations met?*' There were four missing answers, fourteen said 'yes, **expectations were more than met**', three who qualified their response said they would naturally **like more if possible**, and only two mentioned they were **disappointed** that they did not receive direct inputs that they had hoped to receive.

> *Not all my expectations were met, as some clubs got cement and machines and our club didn't get that, although we managed to pull through with self reliance. We would also like to see a situation where we also get inputs like oil pressing machines.* (#18)

In fact, the high demand created for sanitation far outstripped the ability of the project to provide and when funding was cut off in Zimbabwe for political reasons, the sanitation component of the project was abandoned without any exit strategy in place. By this stage however, most of the clubs in the ten old wards of Makoni had been assisted with oil presses, peanut grinders and soap making equipment but this could not be extended to all clubs, and demand was high.

However as the emphasis on the Health Club was on knowledge rather than material gain it appears there was not too much resentment from those who did not receive a subsidy, and many have gone on to arrange their own home improvements without subsidy.

> *Definitely I needed the knowledge, if you have the knowledge you can do what you want to do.* (#19)

9.1.1.6. Members' future commitment to the Community Health Club

As the Health Clubs had been running for over four years without direct support for inputs, it was interesting to find out if the level of commitment of time and energy from each member has remained constant, given that there have been no material incentives to remain within the clubs. There were some strong statements of loyalty, with five saying they would continue **until their death** with the club! There were nine mentions of the **social gratification** of unity, socialising, support from membership and four mentioned the continual **need to learn**. Fitness, **sport** and good presentation were also reasons for staying, and the one male mentioned he that still had **a role to play** within the community. Only one person emphasised not only knowledge but also the importance of **financial gain** from her income generating projects (See

Annex13.1.5). The enthusiasm for the Health Club was expressed most forcefully by a 44 year old woman, who explained:

> *Really I will (stay). I have to die there! It keeps me fit, because every day I have to be presentable. When you meet me you have to know this is Somebody in this ward. So it keeps me smart and keeps me healthy and fit.* (#4)

Another woman illustrated how she had been supported by the membership in an emergency.

> *I will like to continue with the club because it has helped me in so many ways. Recently I got all my property stolen at my homestead and all the club members came in with their assistance in terms of clothing and other things. So I regard the club as very, very important.* (#11)

9.1.1.7. How Community Health Clubs are recommended to friends

As a way of getting members to explain what the club means to them and what it could do for rural women, they were asked to explain how they would explain the Community Health Club to non-members in order to persuade them to join (See Annex. 13.1.7.). Only one mentioned that they might hint at **inputs,** whilst another said she would tell them not to expect to get any material benefit until they had completed the sessions. When asked if this was fair, she was adamant that it was the best way of dealing with incentives. All the others only emphasized non-material benefits such as the **changes** that come about as a result of good knowledge and improved hygiene. Four indicated that their own **good example** was the best way, saying they would just invite people to see their own homesteads to become convinced. One mentioned **drama** is the best way to spread the message of good hygiene, and one mentioned interestingly that **Adult Literacy Classes** would entice new members. It was striking how strongly the respondents expressed themselves and how they had attributed the main advantages to **reduction of disease** and healthier living. The oldest respondent (a woman of 72), had this to say about how the Health Club and the church can be compared:

> *Even if you don't tell them, they will see! A good example of how much our lives have changed. They will tell you. 'Ah these are the health people'. Before we say anything and they will say, 'These are good people!'*

Is there any similarity between the health people and those who are in the church groups?

The difference is that the Health Club members they go and help, they don't just kneel down and pray. That is the difference. So I do both: the church and the health.

Is there any clash between the two?

Of course (not)! The club activities: the church likes them. (#15. Apostolic Faith).

Seven out of twenty were not asked how many friends they had persuaded to join. Of the remaining fourteen respondents, 36% said they had introduced between one and five friends, 14% said from six to nine, whilst the majority of 43% people had introduced ten or more friends (See Table 33, below). One respondent (#7) who had initiated the Health Club, (Annex.14.19.) claimed to have persuaded at least 25 friends who had all graduated

Table 34: *Reasons given by CHC members to persuade others to join CHC, Makoni, (2004)*

# PERSUADED TO JOIN CHC	Number of Respondents	% Respondents
1-5	5	36
6-9	2	14
10-20	6	43
<20	1	7
TOTAL	14	100

This desire to introduce others was taken as a positive indicator of their own dedication, and also gave some idea of how Community Health Clubs would expand over time with an average of eight friends per member being pulled in (See. Annex13.1.7). It can be calculated that if, at the first meeting there are only twenty people, within a few months this can be expected to increase to at least one hundred members. This has also been the pattern in reality. Therefore the intervention should allow for flexible and ongoing enrolment for the successive members to enable the Health Club to reach its full potential of at least 80% coverage of a village.

9.1.1.8 Sustainability of the Community Health Club over time

One of the main objectives of this study was to verify how well the clubs had survived without external material support since the health promotion project officially ended in February 2002 (See Section 6.8.). In order to verify how many of activities were still ongoing, each respondent was asked how often the club met and for what reason.

Table 35: *Regularity of Health Club meetings <5 years after end of external funding*

FREQUENCY OF MEETING	NUMBER OF RESPONDENTS	% RESPONDENT	% REASONS* FOR CHC MEETING		
			Health	Income Generation	Sport
No meetings	0	0	0	0	0
Twice weekly	2	14	2	0	0
Weekly	10	72	70	60	20
Monthly	2	14	2	0	0
Total	14	100%	11	6	2

*** More than one reason per respondent given**

Regularity of meetings in each CHC enabled their level of activity to be gauged and it was found that the seventeen respondents who were asked all reported regular meetings arranged by their committees. 14% met **monthly** and 14% met **twice weekly**, whilst 72% said they met **weekly**. Reasons for meeting included 70% for **health education** reasons; whilst 60% met for the **IG projects in addition to health**, and 20% had **weekly netball** practice. Not one of the Health Clubs that were sampled reported '**no activities**'. Thus between 6-9 years after formation, all ten clubs sampled were still operational (See Table 34 above).

It was clear that these clubs had established strong leadership (with the exception of Ruombwe, See Fig 26, below) and had become significant institutions in the village. In contrast to the national economy of Zimbabwe as a whole, the club members were surviving well with nutrition gardens and produce for sale.

One group demonstrated how they had overcome difficulties presented by the hyperinflation as illustrated below (See Annex 13.1.8.):

> *We often meet, twice a month on the 15th and the 30th to arrange for our soap making project.*
>
> ***Observer: Is that going on now?*** (given the economic crisis in the country)
>
> *We are no longer making the soap but we are actually ordering ready made soap for sale and oil. It is very difficult to get tallow, but if we get tallow we make our own soap.*
>
> ***Observer: Who do you sell to?***

To the village, the local market.

Observer: Is it popular, Is it needed?

To sell forty bars of soap it will take less than a day, we would have sold them all.

Observer: Do they sell it so well because it is a lower price or what?

We sell it for Z$5,500 per bar. (approximately. US$1 in 2004.) (#8)

The following extract from interview #16 (Annex. 13.1.8.) shows how health messages continue to be circulated within the community, although official health sessions are not being held by MoH in that ward. It is also interesting that the respondent's perception of malaria having been reduced by burning cow dung, and keeping grass cut around the house; simple cost effective interventions which are not usually considered enough to prevent malaria.

We always meet once a week during the dry season, when we have sunflowers we will be processing the oil.

And during this wet season when we don't have oil, we always meet to remind each other, especially in the prevention of malaria, we always tell each other, we must use mosquito repellent, to tell our children to put on long sleeve clothing and also to close our windows early and also to send people to hospital earlier. I think there has been a reduction in malaria cases around. If we don't have coils in our house we always use cow dung to burn. Also now that people cut grass around, malaria has actually been reduced. Some people have mosquito nets but some don't. (#16)

If these methods have been effective further investigation is needed to establish whether malaria is actually being reduced by such simple means (See. Section 10.14.4.).

9.1.1.9. Additional comments

This section was left open so that any other additional information or comments could be recorded. It most cases it was used by respondents to thank the NGO for

the visit because they valued the chance to be noticed, and in many cases they requested more support. However one 44 year old lady wanted to put on record her perception of the impact that the herbal remedies have made in the area.

I would like to add something about the herbs that have become something very important around this ward. You know, at first people didn't believe that something like a small plant can help them. But when we come to use them... You know it was done practically... Introducing and using at the same time. You know it is helping a lot. In this area we haven't got a clinic near us. Only Nyamidzi Clinic 30 kms away from us, or Mt Zuma behind there about 30 kms from here, so people are relying on herbs. If you come to my garden they are now shrubs because of being used. When I am away now (there will have been) three or four people coming to my house saying 'Where is she. May we have the herbs?' This is happening. One have got stomach ache, one have got herpes, one have got this, and all that we are curing with herbs.

Observer: Do you think the herbs can be misused at all? Have you had problems where someone may have been sick from taking them?

We haven't met that yet. No. I haven't met any problems. Any herb that we have taken they (the clients) just recommend it. They say, 'This was wonderful. This has helped me a lot!'

Observer: Where did you get the information? Where did you find out about it?

When we went for the workshops in Dumbamwe with Josephine (ZimAHEAD) they brought up those from Fabidzanai (another NGO), they introduced every herb to us, and how you use it, and we were taking the notes. So from those notes now we can use it even by head (See Annex 3.1).

9.1.2. THE EFFECT OF THE CLUB ON THE MEMBER

Having been given some insights as to what is actually taking place within the Health Clubs and to see why members have adhered to the clubs, the next interest was to prompt members to express how the club has impacted on them personally in their own lives. This was measured in terms of their own sense of worth, and how their

relationships and personal image may have been altered as reflected in the esteem they receive from their husbands, children, in-laws and friends, as well as the community at large (See Annex 13.2.1).

9.1.2.1. Main Value for Self

Table 36: *Main value for self given by CHC members, Makoni (2004)*

MAIN VALUE	EXAMPLES GIVEN	Number of responses	% Total responses
Nurture family	Caring for family, protection of family, family values	12	28
Self reliance	Poverty, enough food, growing food, better living standards	9	21
Self discipline	Correct behaviour and values, strength of character	6	14
Health	Health, good home hygiene, care of home, cleanliness	6	14
Knowledge	Value of knowledge, education, school, information.	4	9
Self-efficacy	Independence, self sufficiency, coping, self-confidence	3	7
Happiness	Love, unity, togetherness, happiness, nurturing, neighbours	3	7
TOTAL		43	100

To try to establish what is a core value for their own '*raison d'etre*', the question was asked, '*What is the most important thing in your life as a woman (or as a man)?*' (See Annex 13.2.1.) Some found this question too abstract and as a result difficult to answer. Respondent #4, although she had two years of secondary schooling, giggled in embarrassment as she mentally wrestled with the concept and repeated the question seeking clarification:

... most important to do?

Observer: What is life for? Why do think we are here? What is the most important thing to you?

Myself? ... maybe I can be lost (difficult to explain) but... what I can only think that I am important because I care for my family. That is one important thing I can say I am here for. Then to look for myself also its important...(laughs, embarrassed)....(#4)

Most women mentioned more than one main aspect for the main value of their life. By far the most salient was the perception that a women exists primarily to **sustain and nurture the family.** (See Section 3.2)

There were 43 mentions of which 28% referred to nurturing the family, 21% ascribed their own importance to the practical level of growing food, providing enough for children, and keeping good living standards: these material aspects of provision were grouped under the term **self reliance**. 14% concerned an unanticipated value of **'self discipline'** as being the key virtue for a woman, which entails the concept of moral self-control, humility, obedience to husband and selfless behaviour. These are in fact core traditional values for women in the Shona culture *(See Section 3.4)*. Equal to self-discipline was **Health,** 14% of mentions of ideas such as 'good home hygiene', 'healthy living', or 'cleanliness', indicating that the training in Community Health Clubs may have persuaded members of the link between cleanliness and health, unlike in other health promotion studies where this seems not to be evident (Curtis, 2000). There were 9% of mentions related to **knowledge,** with ideas such as the value of education, school and acquiring correct information. 7% of mentions related to **self-efficacy**, indicating value for independence, self sufficiency, coping and self confidence. Of equal importance but at the end of the scale with self-efficacy, was the importance of **happiness**, used to encompass ideas expressing love, unity, togetherness, nurturing and neighbourliness.

9.1.2.2. Nurturing the family

Having ascertained which were the core values for each woman (See Section 9.1.2.1. above), the respondent was then asked *'How does the club help you to achieve this?'* (See Annex.13.2.2.). In most cases respondents made the connection between the two questions, but tended to respond to this question with a more concrete illustration of **activities** within the club which had enabled her to meet her ideal, mainly in a material sense of being able to **nurture her family** by growing enough food, raising money for school fees by selling vegetables or helping her husband earn money (11% of responses). The club is seen as a means of **gaining knowledge** (11% of responses), in order to **improve home hygiene** and prevent diseases (22% of responses).

The more abstract aspects of **self-efficacy** and **self discipline** were not illustrated except in two cases, with a 63 year old saying *'I am different from other old women'* (#6), and a 72 year old saying,

> *'The clubs are so good, we learn a lot. That we should drink clean, uncontaminated water; a lot we learn from these clubs.*

Table 37: Ways life has changed as a result of the CHC, Makoni (2004)

Category	Enabling factors	Number responses	% of total responses
Hygiene Behaviour	Sweeping, pot racks, plates, hygiene behaviour	**20**	**22**
Home improvement	Orchards, gardens, flowers, lawn, new rooms, asbestos roof	**14**	**16**
Self-efficacy	Husband/social respect, pride, time keeping, work ethic	**10**	**11**
Sanitation	New toilet, cat san, clean latrines	**10**	**11**
Self reliance	Income generation, supporting financially, selling/buying items	**9**	**10**
Water	Improved wells, covered water, ladle, own cups	**8**	**9**
Knowledge	Improved knowledge, understanding of disease, germ theory	**6**	**7**
Disease reduction	Malaria, diarrhoea	**5**	**6**
Community	Community support, unity, togetherness	**5**	**6**
HIV/AIDS support	Use of herbs, caring, home remedies	**2**	**2**
TOTAL		**89**	100

Observer: Do you know more than your mother?

Ah. Number one! I am much better than my mother. I used to be given left over food, even if I have not washed my hands, but now I cannot do that to my grandchildren! Children must wash their hands first before they get any food.' (#15)

It was difficult to get abstract analysis of **self improvement** and only one 49 year old captured some of the less obvious qualities that have clearly been developed in the clubs:

'The club has helped me to improve in this because I am always with others socialising. And through that way we create a lot of love and it has also helped to be self reliant. Especially before that, we didn't have any nutrition gardens and we didn't have toilets, now we have all those facilities through self reliance.' (#16)

Most women were concerned with straightforward survival in monetary terms and were quick to illustrate how the combination of knowledge, and its application in good farming and nutrition, as well as improved home hygiene and decreased ill health, has enabled them to be better mothers. A 27 year old illustrated it like this:

(That) the clubs have helped me to acquire knowledge to be able to care for my children is something that I like most. Now I am able to care for them. Also I am motivated to get an income by myself and help my husband, which is needed in life. At this time he is only doing some soft (occasional) jobs. Working at home (for a time) and then he is not working (does not have work) . He is living with his younger brother (in town). (#14)

The pleasure of being self sufficient, of not having to rely on one's husband as a sole provider, was also portrayed by a 44 year old who has risen in the club to become Ward Co-ordinator and who is an example of how the club activities can transform the life of a previously unknown rural woman if she becomes a community leader.

It helps me because now I have no problem, I have nothing to think too much (i.e. I don't have to worry) *that instead of just asking my husband what to do next, I can just do it myself. It's also surprised him that I have got something from the club.* (I tell him) *'Don't worry about the soap (I have paid for it) already. Don't worry, I have paid the school fees!'...so it relieved all our minds, myself and the husband.* ... (laughs with pride) (#4)

9.1.2.3. Reputation as a knowledgeable person

I am regarded as someone knowledgeable. Almost all the people from the surrounding villages decided to have oil processing at my homestead since it is a good looking homestead where good hygiene practices are done. (#11)

As all those interviewed had received public recognition, having been presented with their certificates at the graduation day, they were asked if they thought that they were considered by others to be especially knowledgeable in health and hygiene and if they were deferred to in any way, despite being among many who had achieved this level within the village. All of them admitted that they felt their reputation was one of a **'knowledgeable person'** in terms of health and hygiene (See Annex.13.2.3.). Some were shy to take credit, but would illustrate it by *'my children look quite different'*, *'she has shown from her home and has many followers'*, or *'she is regarded as rich'* because her home looks so smart, and one even called herself a *'health extremist'*, meaning possibly a perfectionist. Two were able to illustrate their **public recognition** as shown in one of the quotes below.

Yes I am considered to be someone knowledgeable now that I am also considered at gatherings, and also people would want to hold their gatherings at my homestead because it is always kept clean. (#17, aged 27)

9.1.2.4. Value of Social Recognition and Respect

To be known by others carries valued social prestige. The weekly community health sessions have provided a forum for this public recognition (See Section. 3.1.).

Despite the fact that 50% interviewed had no special roles as **ordinary club members**, they all responded positively to the question, *'If you have gained respect is this important to you?'* (See Annex. 13.2.4.). This indicated that they had all achieved some degree of self respect and enjoyed deference from others, even without a key leadership role. One 40 year old was able to analyse the community at large and felt that respect generally for each other had increased, and this in sociological terms would refer to increase in Social Capital (See p.67, Section. 3.8) in that it illustrated a high level of trust within the area:

I get quite a lot of respect from others. Because now everyone is busy doing their own things and nobody actually bothers about others' business so there is quite a lot of respect amongst the community.

Observer: Before. How was it then?

... like one could have a toilet and the other one wouldn't have a toilet and you could not allow any community member to come into your toilet and use it and also maybe if one is allowed to use the toilet the one other would go and inspect and see if that person has used it properly. Nowadays it is no longer happening that way, We know that even if someone gets into the toilet, he knows how to use it. (#8)

A 70 year old was able to describe how the attitude of the community had changed towards Health Club members.

It is very important to me as people now regard me as someone who is doing something sensible. Early days, people would laugh at us and ask us why we are wasting our time by going to sit down under a tree,(having a meeting) but now everyone wishes to be a Health Club member.(#18)

One of the ward co-ordinators enjoys her public recognition:

> *Very much. It (respect) is so important to me. Because whenever there is a big meeting, that can be called by counsellors, MPs or so on, they also have to call me. They have to tell me…'We have called you. This is taking place. There is a function'. This and this. And it shows also a respect to me. I feel I am somebody in the area. I am not dumped.(#4)*

The expression 'I am not dumped' means 'I am Somebody', with the perception of being more than an abandoned rural wife (See p.72, Section. 4.2).

9.1.2.5. Comparative Status of Rural and Urban Lifestyle

For many years there has been a drain from the rural areas as people seek work in the towns. There has been a common perception that a large material gap exists between rural living and the standard of living in the towns, where western goods are seen to make life more appealing. Women in town usually consider themselves smarter and more fashionable. The original wives, who are left in the rural homesteads to keep *the musha* (rural ancestral home) going, have often been 'dumped' for smarter 'second wives', which their husbands often take on in town. In addition rural women are often socially embarrassed when friends and relations visit them from town, as they are aware that their hygiene standards are inferior as many homes have no facilities such as a latrine. In order to understand if this perception of social inferiority has been altered after the many changes that have taken place in the lives of Health Club members, the question was asked, *'Do you think you are on the same level as a person in town?'* (See Annex.13.2.5.) Surprisingly, this question was often met with a stream of laughter or a strong exclamation of achievement, such as this 60 year old who boasted,

> *I am far much better than the townspeople. When they come and see me they will see how much I have changed. There is a tremendous change. So I can not compare myself* (I am better than them). *They are afraid of me…*

If someone is 'afraid of you', it indicates they feel threatened by a superior. Many mentioned that they were able to control their own lives as they owned their own land and could source their provisions by their own labour, while the people in town were dependent on buying what they needed. At the time of the survey, the minimum wage could not provide enough for the staple food for a family. Many were paid less than the cost of the transport to get to work, and unemployment was over 70%. Therefore those

on the land were able to subsist, and were also given food aid by external agencies in the 2003 drought. Apart from the comfort of electricity none could mention any advantage to living in town and they were content to remain in their village.

> *But when we come to the really life. In town they have got ..what can I say... they are a bit ... higher on us because they have got electricity and so forth whereas we just use fire. That is the only difference. But life. Really living, I think we are better. Like now I can work for myself. In town it is not easy to get a job. When I go to town I don't even get a cent from somewhere but here I can make money, from my garden, from my fields from selling this and that, and I can get most of the food free, because I have ploughed. So I prefer being at my home than in town.(laughs)* (#4)

The only male respondent with 'O' levels spoke of less material reasons for staying in the rural areas:

> *It is more or less the same. Even better. Yes, because when you are out here you have a good environment unlike in town (with) air pollution; here we are quite free. You are taught in the Health Clubs to plant trees around and things like that. Shrubs around the place and you know that idea makes you feel quite energetic.* (#1)

The youngest respondent was a mother of 27 with 'O' levels. From her age and education it would be reasonable to expect her to hanker after town life. In fact, she felt living standards in town were comparable with changes they had made in their home.

> *I think we are now at the same level since in town they have safe water and we also have safe water. They have clean toilets and we also have clean toilets. And also they have electricity and here we can also have solar electricity. (#14)*

9.1.2.6. Home Improvements Through Self Reliance

An indicator of the levels of personal achievement (which may have been due to motivation through the changing of values within the Health Club membership), were taken as the number and type of home improvements that have taken place without external financial support of subsidy (i.e. self reliance). The question was therefore asked, *'What changes have you made to your compound with your own resources?'* (See Annex.13.2.6.) This was intended to refer to financial resources, however many cited non-material improvements through their personal efforts.

Table 37: *Perceived changes within the home due to CHC activity, Makoni (2004)*

CHANGES	EXAMPLES	Number of responses	% Total responses
Environment Facilities	Nutrition garden	9	
	Family well /borehole	9	
	Clean environment	1	
	Compost pit	1	
Sub Total		18	32
Home improvement	Latrine	8	
	New living rooms	4	
	Shower/bathroom	3	
	Pot rack	4	
	Decorated kitchen	8	
	New cooking utensils, Sink, Individual plates		
Sub Total		27	48
Hygiene	Wash hands	1	
	Use latrine	1	
Sub Total		2	4
Attitude	Good knowledge	2	
	Order/smartness	7	
Sub Total		9	16
TOTAL		56	100

Some had benefited from the three bag cement subsidy that some graduated members received, but many had built toilets without subsidy, subsequent to the project ending. All felt their latrines they had been built 'with their own resources' as they had paid for labour and contributed the construction costs.

> *We managed to construct a toilet. My husband managed to put on the roofing materials. Me and my children - we dug the pit. We got some of the cement from the health personnel.* (#12)

There had been no subsidy for protected family wells, but eight families had dug and lined **protected family wells** at their own expense. Of interest is how many reported having **extended their living quarters** from one family bedroom to extra rooms for the children.

In summary there were 32% of the mentions focused on changes to the compound (nutrition garden, borehole, compost pit), 48% were mentions of home improvements (new rooms, kitchen equipment) that had been made, 4% were mentions of hygiene behaviour change (hand washing and clean latrine) and 16% were mentions of a new

attitude and knowledge (See Table 39, above). These findings cannot accurately quantify home improvements but are used as indicators of the perceived changes due to the club. For example, all the respondents are likely to have a pot rack but only four considered it worth mentioning or had remembered to include it. Some items mentioned, (paying for school fees, helping others, or playing netball) were not home improvements as such, but important in terms of perceived change in lifestyle.

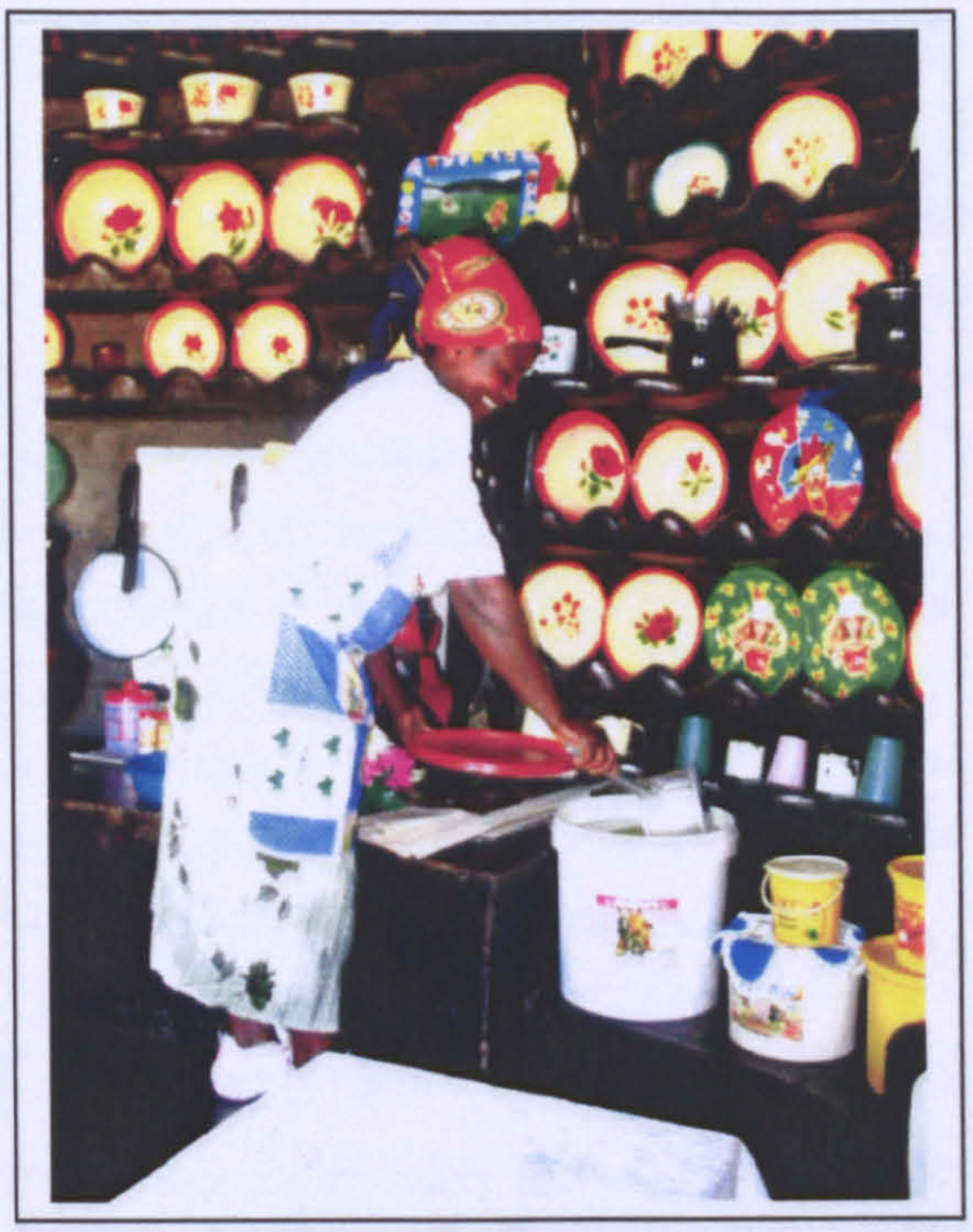


Fig 22:

A Health Club Member taking drinking water with a home made tin ladle, from a covered bucket. Many members have invested considerable time and effort decorating their kitchens: plates and cups are displayed on a dresser moulded in clay into the walls of the mud hut, and highly polished. Fuel efficient stoves and seats for women as well as men are also a new modification to the traditional kitchen layout, with a central fireplace and a mat for women on the floor (See p.260).

I built my own toilet without outside help and put up an outside shower, and a family well and I have a nutrition garden, in fact two of them, and I grow vegetables, sweet potatoes and maize. I am sending my children to school.

Observer: To build the toilet, how did you afford it?

From those sales. (#19)

I have built my own toilet and my own protected well, all with my own money, and now I am anxious to build a bathing room. I have decorated my kitchen, (Fig 40) I have brought plates and I have beautified it. Outside I have got a nutrition garden which is flourishing.
(#7. aged 48)

To fully comprehend this achievement, these achievements should be placed in the context of general economic decline *(See p.79, 4.4.4.)* and a two year drought, from 2001 to 2003, when over half the country has been receiving international food aid.

One surprising revelation was from a woman of 70 years, with only two years of schooling who claimed that she was trained as a builder and '*helped other to build their own Blair latrines.*' (#18)

9.1.3. THE EFFECT OF THE CLUB ON THE FAMILY OF THE MEMBER

In the Shona culture, women are the main custodians of family care and therefore their knowledge of preventing disease, of good nutrition and ways to ensure good health through safe hygiene practices will impact on the rest of the family. To put this supposition to the test and to understand the dynamics of the Health Clubs within the homes, women were asked how their relationship with their children and husband had changed as a result of their membership of the Health Club. Traditionally women usually live in the husband's home area, and the need for approval from in-laws is a constant source of anxiety for many wives (See p.75, Section 4.2.3.). Therefore it was considered a good indicator of self worth to find out how much women felt that they were appreciated by their husband's family.

9.1.3.1. Relationship with Spouse

One of the determinants of health is a women's ability to make informed decisions that will positively affect her family's health. This ability is often undermined by the husband's control of his wife and, as this may prohibit her performance, a women's self confidence to be able to pursue her own objectives is important. The ultimate aim of the Community Health Club is to provide an opportunity for the empowerment of women through knowledge and skills and this is reflected in the appreciation and respect they receive from their family.

Before considering the attitude of the husband towards his wife, we must bear in mind the cultural norms for correct behaviour in marriage. Given the traditional control of women by their husbands (See p.75, Section 4.2.3.), the relationship between husband and wife is one of the measures of effectiveness in ascertaining the ability of the Health Clubs to modify values and cultural norms and to enable women to become more equal partners with their husbands.

The question, *'How has the club changed your relationship with your husband?'* elicited highly significant indications that the power relations between women and their husbands have shifted to enable women to make decisions. No less than half the

women mentioned the shift in their husbands' attitude to their club-going. This was described as an **initial reluctance** or at times **outright disapproval** in the beginning, to **strong approval** and **encouragement** at the present time. Six attributed this to their husbands having **seen hygiene changes** in the home of which they approved, and three mentioned that their husbands were pleased by their **ability to contribute financially**. The pleasure that this respect brings to women is illustrated below, by a 51 year old woman who laughed as she explained,

> *Initially my husband would agree (to let me go to the club), but reluctantly. But as time went on, he enjoyed a good relationship (with me). I remember one day he actually told me to go and join the others and he could go and get thatching grass.(her normal task) He actually brought me my shoes because I didn't have shoes at that moment!* (#12)

Other husbands showed their support by **reminding women to go to the club**, and similar stories to the one below, were repeated by eight respondents:

> *It was difficult at the beginning for me to come to the health sessions because my husband was not happy. But after that when I came here and got the information and went back home and discussed with him and practised what I learnt and he developed to like it and now he is supporting me and he tells me 'You are late. You must run. You must go.'*
>
> ***Observer: In terms of respect for her how much has it changed?***
>
> *I have gained more respect from him because now I make money from the sales and I support my family and he is quite happy about it.*

The only male respondent provided an insight into how the wife is becoming a decision maker and **respected for her own opinions**, and an interesting companion rather than merely providing household services.

> *There is quite a change.*
>
> ***Observer: Why?***
>
> *Because now you can be able to sit down and discuss about (things). You know some of the things not only within your catchment area but elsewhere and compare. Even world wide global.*

Observer: You talk about some big issues?

Yes.

Observer: And before?

No, no, no! We never had such discussions. I think the Health Clubs came in to give us the light because we are used to meetings now. Unlike the meetings we normally have in the village whereby we talk about what we normally do there. The Health Clubs maybe you get new ideas from new people from elsewhere. You get friends, like some of the friends you bring for us down here and we introduce new things, like bee keeping ..hm.. like what? lots more.

Observer: So you are talking about outside people coming with fresh ideas. Is that what you like ...

Not necessarily outside people coming in with new ideas but I would say it is helpful training with outside people because then you get new ideas which can contribute to what you have.

Observer: What about with your family, have you noticed anything?

Yes. I have noticed a lot of change. A lot of change. Because my wife now would be able to sit down ..er .. we are able to discuss. What I am trying to say is hm... I give her these gender issues I am talking about whereby we can also take a role of discussing about something and I listen and I don't argue. We actually debate on the thing.

Observer: So you don't mind now if she stands up to you and says, 'I know better?'

No I don't mind really.

Observer: And before you would mind that?

Yes because before it was cultural.

Observer: Traditional?

Yes. It was traditional. Some one would say 'Ah no, why develop the person like that!' But now I say 'Ah no, man. Look! We are promoting this gender issue and you have got to be unafraid to say whatever is promoting the family'.

Observer: She in the club?

She is part of the sewing club

Observer? So she did the health sessions with you?

She did. (#1)

Table 38 below, summarises the different categories that have been used to reduce the interviews to a few concepts. These follow the three key motivations described by McClelland (1967) (See Section 3.6) as the main motives that drive the human mind.

- The **Need for Affiliation** has been divided in those statements mentioning the spouse in a supportive, respectful or appreciative role;
- The **Need for Achievement** concentrates on either indicators of cognitive achievement or those practices within the home that result from Health Club recommendations;
- The **Need for Power** is divided into statements of status that show the wife as a role model, or that show independent decision making or financial independence.

The analysis shows that the Health Clubs have impacted on the husband and wife's personal relationship, foremost in the sphere of affiliation. There were 15 instances of which 40% of the total number of responses indicated a closer and more caring relationship. Secondly, 52% of the mentions are concerned with achievement of cognitive and practical skills that have shifted the relationship. Lastly 22% of the mentions relate to instances that indicate that the woman is being empowered and that this has been accepted by her husband. However all three aspects are interrelated as achievement will affect the need for power as more confidence is gained and a wife's self-efficacy is raised. These aspects will be analysed in more detail in the discussion (See p.242, Section 10.11.6.).

Table 38: Changes in Husband's Attitude and Behaviour, Related to Wife's Needs, Makoni (2004)

WIFE'S NEED	HUSBAND'S ATTITUDE	EXAMPLES OF NEW ATTITUDE AND BEHAVIOUR	TOTAL #	%
	Supportive	New attitude to her, encourages, Reminds her to go to the club, Helps with domestic chores, Allowed to travel to CHC meetings, Encourages her to fulfil herself	8	
AFFILIATION	Respectful	Listens to wife, doesn't dominate wife, Equal respect for her knowledge,	4	
	Appreciative	Shows affection, proud for wife, Takes pleasure in being at home	3	
Sub Total			15	46
ACHIEVEMENT	Cognitive	Discusses with wife as intellectual equal, 'world wide global', new ideas, new people, debate,	4	
	Practical skills	Impressed by good hygiene practices, Impressed by new skills and abilities	6	
Sub Total			10	32
POWER	Role Model	Pleased to have a wife who is an example to others, Admiration from others	1	
	Independent decisions	Acceptance of equal decision making, Promoting gender, changing tradition,	2	
	Financial Independence	Pleased by financial contribution, Easing load of supporting family,	3	
	Common unity	Meetings, share ideas	1	
Sub Total			7	22
TOTAL			32	100

9.1.3.2. Changes with Children

A mother in Shona society is expected to control over her young children who should obey without question and do their own share of the household chores. The difficulty in a society where values are changing rapidly due to western schooling is that children tend to be more informed than their parents and in most cases are more literate. Therefore whilst they are expected to defer to adults, the adults are more ignorant than their offspring. This sets up an uncomfortable dynamic of overt cultural respect but inward disregard of their parents, particularly of their mother. It was of interest to see whether the Health Clubs could balance this situation.

Table 39: *Perceived Changes in Child Care and Children's Attitude and Behaviour Related to Mother's Needs, Makoni (2004)*

MOTHER'S NEED	CHILD CARE	CHILDREN'S BEHAVIOUR	MENTIONS #	%
AFFILIATION	Feels supported	Help mother	4	
	Feels respect	Admire mother	3	
	Feels appreciated	Grateful to mother	7	
Sub Total			14	39
ACHIEVEMENT	Ability to impart knowledge	Learn from mother	5	
	Ability to organise home	Change hygiene	10	
Sub Total			15	42
POWER	Controls disease	Children feel healthier	1	
	Control hygiene standards	Compliance in hygiene	3	
	Control of finances	Benefits	3	
Sub Total			7	19
TOTAL			36	100

In answer to the question, *'How has your relationship with your children changed as a result of the club activities?'* answers again formed a strong pattern, with a consistency of a few strong themes. As children are expected to help the mother, four respondents indicated that many of the more arduous, or time consuming chores, like cleaning the latrine or sweeping the yard, had been handed over to the children. This was taken as children being **supportive** to their mother. Three also mentioned that they had the **respect** of their offspring, and seven mentioned that their children were now **happy** with the changes set off by the clubs, and credited this to the perceived **reduction of disease** such as diarrhoea and malaria in the family (See Table. 41. above). These responses together comprise 39% of the mentions showing that Mother Need for **Affiliation** has been positively affected by the activities of the club.

The mother as a teacher of children was a strong theme and this has been categorised as meeting the Need for **Achievement**, with 42% of the total mentions indicating that this need has been fulfilled more than others. Of this, there were ten mentions that children had now become well **trained** in hygiene practices and five mentioned their role of **teaching** their children. Three went further to mention how children could perform unsupervised indicating that their teaching had been successful and was sustainable without their authority. Only three mentioned their ability to provide **financially** for their children and one in particular took pleasure in being able to give her children little treats, as well as paying for school fees. One 40 year old mother with six children was proud to show how boys, as well as girls, were helping equally with household chores. Personal authority and control over resources were categorised under the Need for **Power**, and this received the least mentions with 19%.

I am now staying with my boys. But they also had to learn to be hygienic. So much that every morning I don't have to tell them to start sweeping. Everyone knows that they have to sweep, so that the compound stays clean. This is before they go to school. They also have to spread their bed and look for the broom and sweep the compound.

Observer: Is there any difference between the boys and girls?

They all do the same type of household chores. (#8)

A grandmother of 72, looking after 5 grandchildren, as well as an orphan, proudly displayed how she has inculcated her hygiene standards into her charges:

They know what I want. They know what health practices there should be. At times one will say 'Can I have food?' The other one would say, 'Have you washed. The grandmother wants you to wash before you have food'. So we understand what should be done. (#15)

The Need for Affiliation, Achievement and Power have all been met to some degree. However these interviews indicate that the most 'satisfied need', is the Need to Achieve. If a woman feels she has succeeded in bringing up her children well, she has a strong sense of achievement as a mother. The Need for Affiliation is met by the increased love and respect shown to her by her children. Although half as many mentioned aspects for the Need for Power, the family dynamics have been significantly altered by the fact that the mother can now provide financially and feels she has some effect on controlling disease, thus ensuring her children's survival. That the children are well socialised to perform what they have been taught without the need for parental discipline is a mark of this confidence.

9.1.3.3. Relationship with In-laws

As mentioned above a wife's relationship with her husband's parents is crucial to her happiness because they have the power to make her husband critical and discontented with her performance. With the traditional custom of the bridegroom's payment of *lobola*, bride wealth, to secure a wife, the parents of the man often have to assist the husband to pay for his future wife, and accordingly have invested in her as a practical asset to the family fortune. A lazy, gossiping wife is routinely criticised but a dutiful, caring homemaker is, of course, the ideal (See p.75, Section 4.2.4).

The question, *'Has your relationship with your in-laws changed as a result of the Health Club?'* was omitted with five respondents, two had no living in-laws, whilst two, being grandmothers refer to their young daughter-in-laws. However the remaining 14 answers still form a strong pattern (See Annex. 13.3.3.), with 13 women describing ways in which the in laws were **appreciative**. Only one 48 year old woman cited a **jealous** reaction to her good housekeeping an example of the PhD Syndrome, which was seen as wealth by her mother-in-law rather than giving her credit for good practice (See p.102, Table 11).

> *(They think) I am so high and rich and what? They are half - half. At times they change and they think I have a lot of money and I don't have .*
>
> ***Interpreter:*** *They seem not to be very happy. They are a bit jealous (#7)*

Supportive in-laws were mentioned four times, in that they encourage the wife to go to the club, and in one case in-laws actually assisted the respondent in the fields during the agricultural season. This gesture is a strong indicator as usually the wife must work for the in-laws. Five mentions were made of ways a daughter-in-law is **valued**, and these attributes include a wife who is clever, knowledgeable, doesn't gossip or waste time with neighbours, is constructive and helpful.

> *Because of that knowledge I developed to be come very associated with my in laws and my aunts. At times when they are sick I feel I must help them in my house and make sure I care for them the way I think they should be cared for. And when it is serious I make sure that they go to the hospital. I refer them to the hospital and they get treated because now they are respecting me very much. (#13)*

One woman, a Ward Co-ordinator and District Trainer, was able to show how much she was loved because she had been given a cow in appreciation of her caring when her in-laws were ill. This is the highest honour in Shona custom, as women rarely own their own cows. None of the respondents mentioned their earning ability as a reason for the in laws being impressed by them, although this was alluded to in the term, *'a very good asset'*, which conveyed a sense of material gain rather than a positive character attribute, especially as the respondent has already mentioned that her income generating activities had enabled substantial building to be done at the homestead, and that all her children had been taken into the paper making project.

She is saying the in-laws are now considering her as a very good asset at home because she has got the necessary knowledge and she is not a type of a wife who can just go around in the neighbours gossiping. She is quite responsible at home and she is quite knowledgeable. In fact she is saying she has cared for the relatives of her husband who were sick, two of them, and she was given a cow to thank her for the good work she has done.(#2)

Table 40: *Perceived Changes of Attitude and Behaviour of In-laws Related to Wife's Needs, Makoni (2004)*

WIFE'S NEEDS	ATTITUDES AND BEHAVIOUR OF IN-LAWS		Number of Responses	% Total Responses
AFFILIATION	Supportive	Encourages wife to go to CHC, Helps wife in fields	4	
	Respectful	Wife respected as doesn't gossip; Considered clever, knowledgeable,	5	
	Affectionate	Liked by in-laws, appreciate her caring, give her presents	2	
	SUB TOTAL		**11**	**55**
ACHIEVEMENT	Understanding	Belongs to same club, Shares understanding, Same values as in-laws	3	
	Emulation	Share good practices, Copy hygiene behaviours	1	
	SUB TOTAL		**4**	**20**
POWER	Submit to care	Cares for sick, survival of family	2	
	Trusting	Give her children to bring up, Responsible mother, grandmother	2	
	Appreciative	Considered a good family asset	1	
	SUB TOTAL		**5**	**25**
AVOIDANCE	Rejection	Jealous, critical	1	5
TOTAL			**20**	**100**

The 72 year old grandmother was proud to be able to say that her own grown up children (probably working in town) trusted her with their children as her standards were high. The practice of sending children back to the rural areas to be socialised into Shona customs is a strong pattern in Zimbabwe.

They (wives of their sons) are very happy with it. They tell me that the grandmother is having health practices. They know I will look after the children well and feed them well. Sure! (#15)

Once again (See Table 40), the Need for Affiliation has been the most positively affected by Health Club activity with 55% of the total references. This emphasises how the Health Clubs can play a role in developing understanding, respect and common unity in the family and wider society. In this case as well, the Achievement of knowledge and hygiene skills (20%) also helps to unify, which leads to more affiliation. The need for Power (25%) in this context refers to the control the mother's power over the environment in terms of physical survival, as well as her financial and personal independence to control her own life, without the traditional cultural restraint.

9.1.4. PREVENTING AND CURING DISEASE

As each member has attended more than 20 health sessions it is assumed they will know about prevention of communicable diseases. In 2003 herbs began to be propagated and distributed to people living with HIV/AIDS. A wide range of opportunistic diseases are now being treated apparently successfully with locally grown medicinal herbs according the perception of the co-ordinators who report monthly on their home based care activities (See Annex 3). Therefore it is to be expected that many respondents may also know about curative home remedies.

The question, *'Has your family been protected or cured from sickness as a result of this club?'* was posed and the interviewer was asked to probe for a concrete example if claims were positive. This question provoked enthusiasm from all respondents who could all illustrate ways in which the club had helped their family or friends (See Annex.13.4.1). This first hand reportage was convincing in its sincerity, with some claiming to have cured where health centres had failed.

Since I joined this club, to tell the truth, I haven't even come to the clinic. Especially myself, my husband, my children... maybe one... the youngest one, who used to cough. But I used Artemisia. There is no more coughing in my house. No diarrhoea. No what? It improved a lot. If you see my children, you can just see that this one is healthy.

Observer: So you know a lot about curing with herbs?

A lot. A lot... (laughs, joking) *... I am a herbalist now. Even a dying person can rise now and I give her herbs!*

Observer: So you have helped to cure diseases with herbs? For an example?

I had an another boy, a young married man, who had HIV, I can say, because you can even see him and you can see this one has HIV and he had lumps and wounds somewhere here in the genital parts, like boils and they were discharging and smelling. We used German Comfrey and garlic to drink and to put on the wounds. It has cleared off and he has gone back to work.

Observer: Had he come to the hospital first?

Yes, he went to the clinic here in the resettlement. He was taking his tablets but his wounds didn't heal. But when he was taking his tablets but we are also treating him with the comfrey and what? In two weeks time he was OK. (#13)

Health Club members, routinely mentioned the fact that diarrhoea is under control due to their interventions at household level (See Annex 13.4.1.). The literature supports the fact that recommended hygiene practices, if performed routinely, may significantly reduce diarrhoea (Feachem, 1984). It is also the only complaint to have been mentioned by respondents both in connection with their ability to prevent it by good hygiene, as well as the knowledge of how to cure it with herbal remedies. Although they have been taught how to make salt-and-sugar solution (SSS) to re-hydrate, there were no mentions of this treatment.

Table: 41. *Perceived Changes in Family Health and Hygiene, Makoni (2004)*

PERCEIVED CHANGES	# RESPONDENTS MENTIONING (N=17)	% RESPONDENTS MENTIONING
Knowledge of general hygiene	6	35
Knowledge to prevent disease	17	100
Good hygiene practices	3	18
Good nutrition	2	11
Used medicinal herbs	14	82
Has not used herbs	3	18

It was notable that seven respondents out of seventeen made a strong case that they believed malaria to be under control in their home (See Annex. 14), despite the fact that it has been rising annually in Zimbabwe and is now endemic in many areas (See p.85, Section 4.6.2, Table 9). Despite general cynicism that malaria cannot be adequately rolled back at household levels by such simple practices as cutting grass around the homestead and emptying water from breeding grounds. In the Health Clubs, according to reports in the interviews, (See Annex. 13.4.1.) some members burn mosquito coils or

cow dung around the compound at night. They also cover themselves well in the evenings, and some, but not many, have mosquito nets.

> *Before joining the club I used to get problems with malaria every year. Now there is quite some change. Now I have gone for four years without any malaria incident at my house.* (#18, aged 70)

An interesting issue was raised by a mother of 60 who felt that her mentally disabled child had benefited by her knowledge of how to care for him. In addition there were two cases of asthma having been reduced.

> *Ah! This knowledge helped me, very, very much. All these sicknesses have reduced very, very much. This knowledge has helped me and I have practiced it and the results are reflected by the way my family is surviving.*
>
> ***Observer: Which diseases particularly?***
>
> *Coughs, asthma. One was mentally disturbed and he is better. Before this child used to cough too much, I think because of dust. I didn't clear up very much (before). But now because I do clear and then I clean my place. (#13)*

Many herbs were mentioned by name in connection with a cure that has been witnessed or actually affected by the respondent herself (See Table. 42, below).

Every respondent was able to affirm confidently that she had **seen changes in the health status of her own family**. All seventeen respondents attributed improved health to their **increased knowledge**, and could mention one or more diseases that had been reduced in their family. Of this number 82% had direct **knowledge of how to use herbs** and **could provide an example** of their own curative powers; in addition to knowledge of herbs (See Table 42 and 43) 35% mentioned something associated with **knowledge of good hygiene practices** in prevention, although this was not suggested by the question that focused on the curative aspect of disease (See Table 44 below).

Three respondents out of seventeen (18%) mentioned an association with home hygiene that they felt accounted for a **lowering of the disease**. Only 18% had not actually used herbs but still **knew about them from others**. Two respondents (11%) mentioned their use of **good nutrition**, and one poignant story was told how the quality of life was improved for a terminally ill AIDS patient. A 63 year old mother tells

of nursing her grown up child, and it was a compensation to her that she could relieve his symptoms.

Table 42: *Medicinal Herbs used by CHC Members, Makoni District, (2004)*

Type of Herb used	Condition Treated
German Comfrey	Hypertension, genital sores, coughing, painful legs
Wormwood	Diarrhoea; stomach pains
Parsley	Urine infection
Barbinella	Stomach problems, burns.
Artemisia	Stomach problems; coughing; diarrhoea; asthma
Garlic	Genital sores
Thyme, Comfrey, Lavender	Diarrhoea
Lavender alone	Diarrhoea, genital sores, flu/headache
Unspecified herbs	Terminally ill with HV/ AIDS
Good nutrition	HIV/AIDS
Sweet Basil	*Unspecified*
Herbs & honey	Coughing
Rosemary	Unspecified
Mint	High blood pressure

Table 43: *Conditions Treated by CHC Members with Herbs, Makoni (2004)*

CONDITIONS MENTIONED	# CHC MEMBER HERB* USAGE
Urine infections	1
Stomach problems/ pain	2
Wounds	1
Rashes	1
Burns	1
Coughing	3
Breathing difficulty/asthma	2
Painful legs, feet	1
Genital sores	1
Headaches	3
Flu	1
Diarrhoea	2
High blood pressure	3
HIV/AIDS	1
14 conditions mentioned	**23**

* Herbs used indicated in Table. 44. above

Table 44: *Conditions claimed to have been prevented by good hygiene practice, Makoni (2004)*

CONDITIONS MENTIONED BY RESPONDENTS	USE OF GOOD HYGIENE PRACTICE*
Diarrhoea	5
Malaria	7
Mentally disturbed	1
Bilharzia	1
Eye infections	1

*Good hygiene practice indicates all the CHC recommended practises (See Section 5.5.3.)

I am only afraid of the HIV, but other diseases, I have a healthy family.

Interviewer: Do you know about curing with herbs?

I know about herbs because of coming here. I put the herbs in my tea, in porridge, 'maheu'. (Traditional non-alcoholic fermented drink for children)

Interviewer: Have you helped to cure diseases with herbs? Examples?

I helped my child who was sick and made him to survive longer and it helped, although he died but it helped ….(to make him comfortable). He was sick for a long time but he looked very healthy…. Nutrition and herbs, it helped. (#6 aged 63)

9.1.5. THE EFFECT OF THE CLUB ON THE NEIGHBORHOOD

One of the fundamental aims of this study was to find out if there has been an increase in Social Capital (See p.65, Section 3.8) in the area. Therefore it is of key importance to assess whether the activities that take place within the Health Clubs go further than simply accruing benefits for the members themselves.

To find out whether the clubs activities spill over into the community and provide services to the rest of the village, a number of different questions were asked, all focusing on the relationship of members to non-members. First of all a personal perceptive was elicited by the question, *'How has your relationship with neighbours or friends changed?'* Then the respondent was asked to define if there was a difference between their friendship with members and non-members. Probing further, the following questions were asked, *'How are club members different from non-members?'* and *'Why do you think some people didn't join the clubs?'* Finally, some concrete examples were elicited by the question, *'Do you help each other outside club activities?'* referring to

voluntary work that may have developed outside the regular club business. The following sections deal with the responses of each of these issues separately.

9.1.5.1. Relationship with Friends or Neighbours

The question *'How has your relationship with neighbours or friends changed?' was asked.* Of the fifteen responses, eight respondents said that **all the neighbours were part of the club** implying that they understood each other, and one articulated the fact that they *'shared ideas and spoke the same language' (#20*). Eight of them mentioned that they had **influenced people to join the clubs**, by sharing their ideas and encouraging them to improve their hygiene. Of these, four said that they had noted that their neighbours were **copying their practices and facilities**.

> *A lot of my friends they came to join the other Health Clubs groups. And also the one that didn't join started to copy whatever I was doing to improve my compound.* (#17)

Table 45: *Changes Perceived by CHC Members to Indicate Degree of Association with Friends and Neighbours, Makoni (2004).*

DEGREE OF ASSOCIATION WITH FRIENDS	PHRASES USED BY 15 RESPONDENTS	#	%
Influenced to join	Share ideas, persuade to join, promote change	8	31
All joined	Most neighbours are already in club	8	31
Imitation	Copy practices, emulate CHC members	4	14
Respect/ harmony	Don't join but accept differences	2	8
Curious	Want to know what is happening, show interest	2	8
Jealousy	Want to see someone suffering, pull her down	1	4
Speak same language	Understand each other/ common unity	1	4
TOTAL		26	100

Of the five respondents that did not have all their neighbours in their club, two mentioned that they still received a lot of **respect** from them although they didn't want to join themselves, and two mentioned that their neighbours were at least **curious** to find out what they were doing.

> *I think our neighbours also give us a lot of respect, especially at funerals. Once we have a funeral around, they always call the Health Club nearest to them to do the catering. (#16)*

Only one person mentioned that the neighbours were **antagonistic** at times and bore her ill will for her association with the club and the benefits she had reaped, providing another example of the PhD syndrome (See p.102, Section 5.3.1. Table 11)

Yes. It has changed. Some are happy but some are not happy. Because in our African custom some one will just want to see someone suffering and then if your life changes some are not happy about it. (#2)

9.1.5.2. Social Capital

Social Capital (See p.66, Section 3.8.) is taken as the level of support people can expect to receive in their community over and above their individual social network of personal friends or business contacts. The question was asked, *'Do you help each other outside club activities?'* meaning extra voluntary help that is not part of the weekly meetings to arrange projects, discuss health or compete in sports. This cue was readily taken up and all 18 respondents had many examples to illustrate how the community could support its members, and this 'help' was often extended from Health Club members, to the needy and disadvantaged outside the club.

Table 46: *CHC Members' Altruistic Activities Outside Regular Club Sessions*

TYPE OF ACTIVITY	EXAMPLES GIVEN BY RESPONDANTS	Number Responses	% Responses
	Expertise growing herbs,	1	3
Help cure the sick	Give herbs, carers for terminally ill, home remedies, refer to clinic	4	14
Share travel costs	Source goods in town, save bus fares, drought power	2	6
Support the sick	Visit to help practically; chores, firewood, weeding	9	29
Funeral costs	Contribute in cash or kind,	9	29
Hunger / trouble	Contribute food or money, clothes	3	10
Burden of work	Assist in home	1	3
Savings club	Contribute each week for one member	2	6
Total Responses		31	100

9.1.5.3. Difference between Members and Non-members

All of the 16 respondents who were asked, perceived a strong difference in outlook between those who had joined Health Clubs and those who had not. A variety of indicators were identified including a different level of knowledge of diseases; a lack of concern for poor hygiene standards in the home; less house-proud and poor personal presentation.

They are so different. Even if there is a funeral in this village. If you have to go there and you just watch you will find out this one is

different from that. It is just because the one from the Health Club is dressed well and is smart. Even if you go back to their home you just see a very big difference. Those in the Health Clubs they have improved and some others they are trying to copy but it is different from the one who did the lessons. (#4)

Three people mentioned that whilst non-Health Club members may copy club members in terms of putting up facilities such as pot racks or hand washing facilities or latrines, they are less likely to practice good hygiene as a matter of habit because they lack the understanding that favours long term behaviour change.

Club members would practice good health practice and this is witnessed by their clean homesteads, whilst the non-members although they would try and copy they wouldn't actually practice as club members do. (#17)

There is apparently an important difference in their attitude to each other, in that the need for achievement has been aroused and this has displaced the 'PhD (Pull her down) syndrome' (See Chapter 5, Table 11). Club members share their knowledge and do not take exception to correction by others, and *speak the same language*, meaning *they have the same objectives and are united compared to people outside the club* (#13). They are also perceived to be open to change and willing to take advice from others without loss of face.

There is a difference since a non club member would not even replace a broken down pot rack. One would take quite a long time before replacing it. But as a club member we share experiences with each other, and if we encourage each other no one would get annoyed but would take the idea as a very good idea. (#13)

Positive reinforcement from peers has enabled the group to change together and pull each other up. Apparently non-members would be typically more interested in gossip when they meet than health issues or project planning.

Non-members have got quite a lot of misunderstanding amongst them and they spend quite a lot of their time quarrelling; but for us club members, we are always doing something constructive. (#18)

9.1.5.4. Type of Friendship with Members or Non-members

With such a strong response echoed by each respondent on the differences that they perceive to have developed as a result of club membership, it is fair to assume that the type of friendship with non-members would be different from the friendship with fellow club members, much the same way as those who adhere to the same church group have more in common from the sharing of experience, belief, knowledge and ideas. This was substantiated by the responses which confirmed that at a deeper level members perceive themselves as very **different from non-members** although superficially they continue to be friends. Five respondents explained the difference in terms of **not speaking the same language**, of which the quotation below explains it best:

> *'When you are friends with a thief, you end up thieving'* (i.e. Shona proverb meaning 'birds of the same feather flock together'). *You don't speak the same language as those who are outside the clubs. Our objectives are very different. What we admire, what we appreciate and what we are doing. When one is not joining* (the Health Clubs) *the family one doesn't treat* it (health) *as important. That's where the difference is although we stay together*, (in the same area) *but it is the* ***objective*** *that is different. When I come here to Mr Hayisa* (the EHT) *and the club members, I am taught things that are constructive, that protect my family and me, so we are not the same* (as non club members). (#5)

A woman of 27, with O levels, (#17) was the only respondent to say that there was **no difference** in type of friendship since everyone was from the same area. Another woman, from the same area, articulated the traditional politeness of Shona culture (See Section 4.2) to remain superficially egalitarian.

> *No. When we meet, we don't show like that..."I am a club member and you are not in the club". No there is no difference. We only show we are club members when we are at the club, but when we meet at the church or where... ah no, we don't show... (#4)*

9.1.5.5. Reasons for Non-members Not Joining

A frequent question asked by those encountering the concept of Community Health Clubs for the first time is, *'Why does everyone not join the Health Clubs, and what the reasons are for not joining?'* When this question was posed to the respondents, some common sense reasons were cited for why people did not join.

Some husbands had forbidden their wives to go to the clubs for fear of the EHT's sex appeal, as mentioned by five out of sixteen respondents. However, many report that although this was a barrier initially, many **husbands** came to approve of the Health Club once it began to impact on their own living standards. There are many **who did not hear about** the clubs until later and therefore did not understand the objectives and got left behind although in most areas there were opportunities to join at a later stage during the following three years. There are those who are **too busy** and many who live a life split between an agricultural season at the rural home and living with the husband in town when possible. Only one mentioned lack of perceived **material gain**. There were seven mentions of problems of de-motivated people and their negative attitude to the club was described as having no love, no self-esteem, no wish to improve and just **plain lack of interest**. An elderly woman reported that her friends were too embarrassed to come as they thought it would be as difficult as school and they feared to show their ignorance in front of younger people.

Table 47: *Reasons for non-members not joining Health Clubs, Makoni (2004)*

REASONS GIVEN	EXAMPLES GIVEN	Number responses	% Responses
Attitude	No self esteem	7	35
	No wish to improve		
	Lack interest; laziness		
	Too difficult like school		
Mobilisation	Didn't know aims and objectives	5	25
	Didn't hear about it		
Husband	Husbands didn't allow them		20
	Jealous of wife going out	4	
	EHT might seduce wives		
Incentive	Didn't see material incentive	2	10
Residence	Not permanently resident in village	1	5
Busy	Too busy	1	5
TOTAL		20	100

9.2. PAIR-WISE RANKING MATRIX RESULTS

Ten pair-wise ranking exercises (See Section 7.3.3.) were done to answer two questions:

- *What has changed in your life since joining the Health Club?*
- *Of the things which have changed, which are most important to you?*

The method used for the pair-wise ranking exercise has previously been described (See p.152, Section 7.3.3). The activity involves two stages: firstly gathering suggestions from the participants (Section 9.2.1. below) and secondly categorising

them into seven main Needs before ranking them according to their relative value for the participants (Section 9.2.2 below).

9.2.1. Suggestions of Change from Health Club Members

The results from the first part of this activity were drawn from the suggestions from the Health Club Members in answer to the question,

What has changed in your life since joining the Health Club?

Each Health Club was split into groups of ten people who were asked to provide at least ten suggestions in answer to this question. The suggestions were then presented in plenary and categorised to avoid duplication. Most sentences contained multiple suggestions, and had to be split in order to categorise them. Categories were provided by using the typology in the Hierarchy of Needs (Maslow, 1954; See Table 50, below). Putting the ten wards together there were a total of 238 suggestions, divided as follows: 32% concerning Safety, 30% concerning Cognition, 21% on Belonging, 9% on Physiological Needs, 5% relating to Esteem, 3% on Aesthetic issues and only one suggestion relating to Self Achievement.

The consistent pattern that emerged from the suggestions of the ten wards (See Table 46, below) is significant, in that nine out of the ten wards provided a higher prevalence of suggestions addressing the Needs of Safety, Cognition and Belonging (all between 21% and 32%), while the prevalence of Physiological, Esteem, Aesthetic Needs and Self Achievement were all between 9% and less than 1%.

The striking exception to the pattern was Ruombwe ward, where Community Health Clubs have been operational longer than in all other wards (See Section.6.1.1.). This area has proved to be different from the other wards in each aspect of this study (See Discussion Section 11.3.6). The members of Ruombwe placed a strong emphasis on Physiological Needs (10 suggestions out of 31), and unlike the other wards gave little thought to Safety Needs (3 suggestions). In addition they showed a higher interest than other areas in Aesthetic Needs, and this was also the only ward that made any reference at all to Self Achievement (See Table 45, below). Mutanda, like Ruombwe, also had a higher number of suggestions for Physiological factors (7), but unlike Ruombwe also had a high number for Safety (13). To understand these dynamics requires further research as these findings pose further questions as to the long term effects of Community Health Club activities. It is likely that the different results in these two wards could relate to the effectiveness of the EHT as latrines construction was amongst the highest in the district during the intervention period in areas where these

EHTs were operating. Testing for correlation between the level of latrine construction and satisfaction of basic needs would be useful.

Table 48: *Categorisation of Suggestions from Ten Group Discussions in Pair Wise Ranking, Makoni District, (2004).*

CATEGORIES OF NEEDS	TEN SAMPLED WARDS IN MAKONI DISTRICT										SUGGESTIONS	
	Ruomb	Mutan	Nyami	Tanda	Tikwi	Dumb	Mutun	Weya	Ngowe	Sanga	Total	%
Safety	3	13	5	13	10	4	6	6	10	6	76	32
Cognition	7	8	6	15	9	3	4	9	6	3	70	30
Belonging	7	8	2	7	5	2	2	11	4	2	50	21
Physiological	10	7	0	0	3	0	0	0	1	0	21	9
Esteem	0	3	1	0	5	2	0	1	1	0	13	5
Aesthetic	3	0	1	1	1	0	0	0	0	1	7	3
Achievement	1	0	0	0	0	0	0	0	0	0	1	0
Totals	31	39	15	36	33	11	12	27	22	12	238	100

Tikwiri ward stood out in terms of its recognition of Esteem, the only one of the ten wards to mention as many as five suggestions in this category. These results are presented as a comparison to the subsequent part of the exercise, which involved taking the suggestions above and ranking them in a Hierarchy of Needs by pair-wise ranking.

These suggestions reflected the *perception* of the group as to how their lives had changed. It appears from this exercise that Community Health Clubs have had most impact in meeting the Needs of:

- **Safety:** good health, prevention of disease, good hygiene
- **Cognitive:** learning, knowledge, understanding
- **Belonging:** getting together, socialising, common unity

9.2.2. Ranked Priorities in Makoni District

The next stage of this exercise answered the second question:
Of the things which have changed, which are most important to you?

This provides an insight as to whether the findings from the first stage above, (what CHCs have *done* for the community), actually reflected the *priorities* of the people in the intervention area. To find this out, the groups together were asked to respond to each pair of Needs and select the one which was most important to them.

A matrix was drawn on the ground with the Needs placed in a line along both the x and y axis (See. P.153, Section 7.3.3, Fig.18). The suggestions used in the first part of the

exercise, (See 9.2.1. above) were collected together and using the response of the whole group were assigned to one of the categories of Needs. A facilitator called out each pair of needs in turn, and the choice of which was most important, was made orally by the whole crowd. If the choice was not clear by the strength of the oral vote, a vote was taken by show of hands. One of each pair was selected until the matrix was complete (See Section.7.3.3.). A symbol of the Need selected was then put in the appropriate square (e.g. a bunch of leaves if **Belonging** was selected). Once this was done the number of symbols for each Need was counted and the Needs were ranked according to score.

A score for ranking was done in two stages: firstly from the matrix of each Health Club in the ten wards, which gave a ranking of one to seven in each Ward (See Table 50). If two needs tie-scored, they were both given the same score, and the next place was missed (e.g. See Mutanda, Table 47). The highest score was ranked first: $7=1^{st}$, $6= 2^{nd}$, $5=3^{rd}$, $4=4^{th}$, $3=5^{th}$, $2=6^{th}$, and $1=7^{th}$ rank. The ranked positions for each of the seven needs were then added and the result gave the ranking for the whole ten wards.

9.2.3. Findings from the Matrix Pair-wise Ranking Exercises

The ranking of the relative value of the seven Needs for the ten wards is as follows. Safety was ranked first with 21%, indicating that protection from harm and disease had been perceived as most important. Ranked a close second to Safety, was the Cognitive Need (20%) showing the strong value placed on learning. At 17%, a close third, Belonging indicated the high value placed on common unity and socialisation. There is a larger gap between the top three ranks and the lower four ranks. Aesthetic Needs (12%), the Need for Esteem (11%), Physiological Needs (10%), and Self-Achievement (9%). (See p.223, Fig.23)

Once again, (as with the group suggestions shown in Table 46 above), a consistent pattern emerged from all ten wards, with 70% rating Cognitive Needs second after Safety; whilst two wards rated Cognitive higher than Safety. Only Weya ward rated Belonging first, with Cognition second and Safety third. Aesthetic Needs were voted 4^{th} rank by 50% of the wards, whilst some wards voted Esteem, Physiological, Achievement also at 4^{th} position.

Physiological Needs, (interpreted as the need for basic comforts: water, food, sanitation, housing), dropped further in this half of the exercise from 4^{th} rank to 6^{th} rank. This is an unexpected outcome, as it would be reasonable to assume that these basic comforts would be highly sought after. However it appears that basic comforts are less important to Community Health Club members than other more psychological needs of safety, knowledge and community. This perception may also reflect an understanding

by the community themselves, that the provision of basic facilities such as water and sanitation will be of little value unless there is an understanding of how to use these facilities to minimise infectious diseases. Therefore they note that Physiological Needs (water and sanitation) are contingent on Safety (disease prevention through hygiene), Cognition (Understanding) and Belonging (working together), and therefore it was voted as being less important.

***Table 49**: Hierarchy of Needs from Community Pair-Wise Ranking in 10 wards of Makoni, (2004)*

NEEDS	RANKING IN TEN SAMPLED WARDS										SCORE POINTS	
	Ruomb	Mutan	Nyami	Tanda	Tikwi	Dumb	Mutun	Weya	Ngow	Sanga	TOTAL	%
Safety	7	7	6	6	7	7	7	5	7	7	66	21
Cognitive	6	6	7	7	6	6	6	6	6	6	62	20
Belonging	6	6	5	5	5	5	5	7	5	5	54	17
Aesthetic	4	2	4	4	3	4	4	3	2	7	37	12
Esteem	1	3	4	3	4	5	4	4	4	4	36	11
Physiological	4	4	2	3	2	4	4	3	4	4	34	10
Achievement	2	2	2	3	2	4	4	3	2	4	28	9
Total	30	30	30	31	29	35	34	31	30	37	317	100%

As surmised by Maslow (1954), Self Achievement remained the least salient need, and there is no exception to this pattern in the ten wards. Women consistently voted that their own Need to Achieve is the least important of all the options presented.

9.2.4. Analysis of Hierarchy of Needs in Makoni District

Putting the results of the two halves of the exercises together, we can match them in terms of what is *most wanted* by the community and how these *needs are met* by the Community Health Clubs. (See Table 45 and 46, above). This comparison shows that:

- Safety is the most salient need in the community and that this is the Need most met by the CHCs in providing a network of support, prevention from disease and improved chances of child survival.

- Cognitive Needs are the second highest priority to Safety Needs, both in the suggestions from the groups (showing this had been one of the main benefits of the clubs) and from the pair-wise ranking, indicating that this need was a high priority.

- Belonging is ranked third in each case, again showing that the clubs are meeting a perceived need by promoting common unity and togetherness.

- Physiological Needs were not mentioned in six of the wards, but after discussion in the pair-wise ranking it has dropped to sixth place in the hierarchy.

- Esteem Needs were not mentioned by four of the ten groups in their suggestions and it has dropped to fifth place in the ranking, as opposed to third place in the classic Maslow (1954) Hierarchy.

- Half of the wards did not mention Aesthetic Needs but after the discussion they were voted into forth place, with just a few more votes than Esteem, Physiological and Self Achievement.

- The only Need to remain in the same position as in Maslow's Hierarchy is Self Achievement (Self Actualisation), which is confirmed as the least salient need in this community.

9.2.5. Bias and Objectivity

The problem of consistent interpretation of the variety of suggestions into discreet categories was the real difficulty with this research. 'Safety' was generally taken as protection from disease and misfortune, thus suggestions referring to good hygiene were put in this category. However, although knowledge can also protect from disease as it may affect behaviour, the health promotion sessions were usually categorised under Cognitive Needs as they were considered to be educational. The income generation benefits were usually categorised under Safety because, it was argued, the sale of produce provided a dependable income and enough food for the family, thus providing a safety net. As women are often secondary próviders, (supplementing the main income with farming activities) income-generating projects were categorised under Safety rather than seen as a basic Physiological Need. Safe water and good sanitation are known to protect people from disease and yet sometimes they were categorised under Safety and sometimes under Physiological, depending on how the suggestion had been phrased and how the group chose to categorise it. This nebulous definition may be the reason for the Physiological Needs, (Basic Needs such as water, sanitation, good housing) being accorded fifth place when it is logical to assume that it is the primary requirement. Alternatively, this repositioning may be accurate, because in fact the intervention did *not* provide a large amount of assistance in terms of material benefits, (although 2,400 latrines were built between 1999-2000). In areas where EHTs had been the most productive (Ruombwe and Mutanda) Physiological Needs were accorded the highest score. However, this may not be a consistent association as the

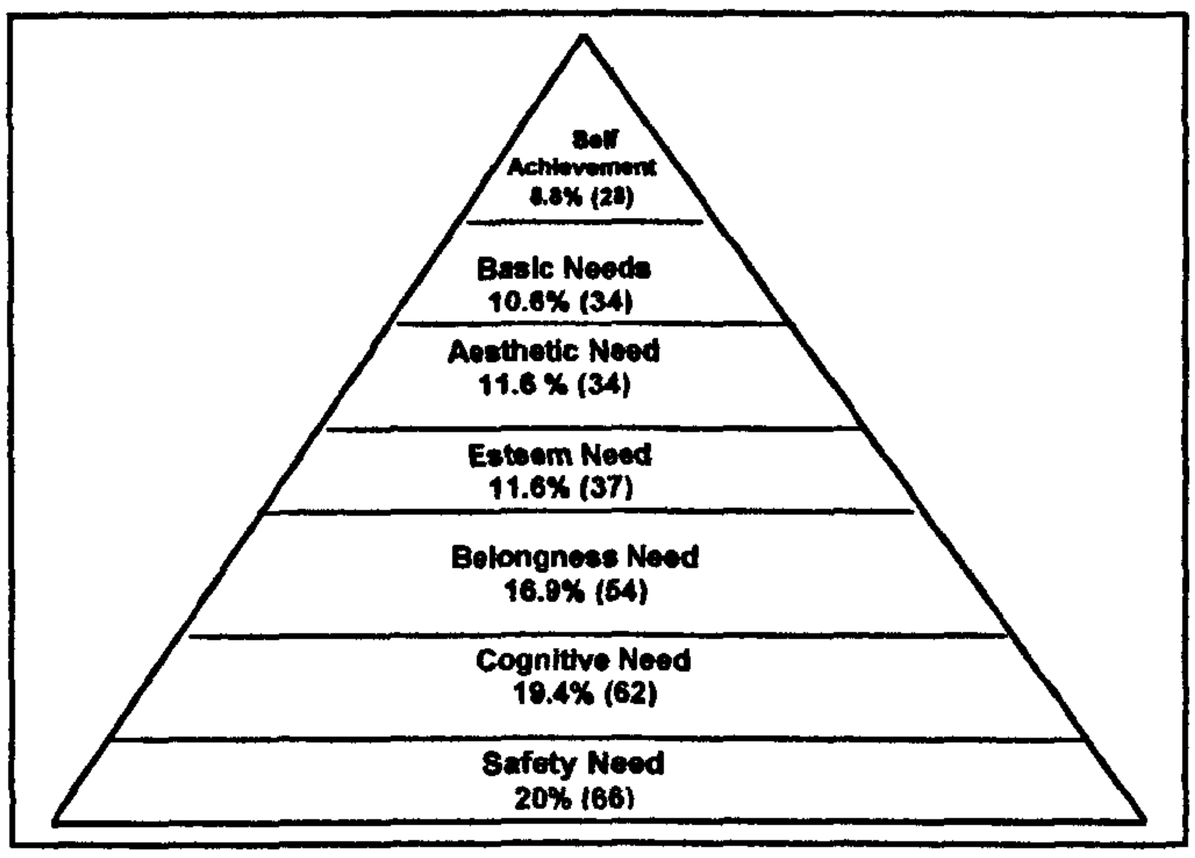
EHT for Mutanda also was operational in Nyamidzi ward, which accorded no weight at all to Physiological Need (See Table 51, above).

The high value placed on the Cognitive Need may be due to the activities of the Health Clubs themselves, which may have developed this love of learning. Thus one cannot claim that the Health Clubs have *met* a need for learning as they may in fact have *created* it before meeting it. In addition, the Health Clubs may attract individuals with a particular need for learning. A control group would also be required to demonstrate the difference in Cognitive Need. However it is apparent that there is an exceptionally high perceived Need for Knowledge in all the Health Clubs surveyed, and this can be used as a foundation for development.

9.2.6. Changing the Hierarchy of Needs

Perhaps the most interesting interpretation of this shift of the Physiological Needs is that in this area they have in fact been met, and as Maslow has claimed, once the Basic Needs are met, the next most salient Need up the hierarchy will be tackled, which (according to Maslow) would be Safety Needs. Esteem Needs may not be important in a culture that is largely egalitarian and there is little expectation amongst women of this being part of their 'lot' in life, as public recognition is largely a male prerogative.

Fig. 23. Revised Hierarchy of Needs for Community Health Clubs, Makoni (2004)



Belonging however is a cultural mechanism for women's survival and something that is fundamental to a society built on the extended family, where polygamy has in the past worked to the advantage of women as wives help each other with household chores when they are pregnant or ill. The Cognitive Need has become developed in Zimbabwe

where it is estimated that 75% of the women have at least functional literacy (Unicef, 1999). As children a taste for learning had been developed by schooling, but as adults most women had had little opportunity, so producing an identified need, what may be termed an 'intellectual starvation' for knowledge. This research has demonstrated firstly that the Cognitive Need is perceived as important, and secondly that the intervention has met this need.

9.3. SUMMARY OF FINDINGS

The main argument of this research is summarised very briefly as follows:

1. There is an identified Cognitive Need for knowledge in the rural areas of Zimbabwe (as shown by the demand for adult literacy and popularity of the Health Clubs).

2. This need for knowledge has been met by the activities in the Community Health Clubs (as identified in the pair-wise ranking and individual interviews).

3. Levels of health knowledge have increased significantly as a result of the health sessions (as shown by the quantitative measurement of increased levels of knowledge).

4. Increased health knowledge has been positively correlated with improved hygiene behaviour (as demonstrated in the survey).

5. This finding refutes the argument underlying vertical interventions, that a cognitive appeal is ineffectual when trying to promote simple hygiene practices.

6. This research supports the rationale of the horizontal approach that semi-literate rural communities have the capacity to respond positively to multiple messaging and can undertake a raft of recommended hygiene practices simultaneously.

7. Community Health Clubs are a cost-effective vehicle for this transfer of knowledge and hygiene behaviour change.

8. The theoretical rationale of the Community Health Club Model approach provides a reliable and predictable training model for thorough health promotion.

CHAPTER 10: DISCUSSION

SUMMARY

Section 10.1. applies Loevinsohn's criteria (1990) to demonstrate that this study incorporates all his key aspects to ensure scientific rigour.

Section.10.2. summarises how the intervention has attempted to meet the principle guidelines of the Ottawa Charter (1986).

Section.10.3. compares level of behaviour change in the intervention with other rigorous studies.

Section.10.4. compares Health Club members' knowledge to other studies.

Section.10.5. looks at how demand-driven sanitation is the outcome of Community Health Clubs.

Section.10.6. discusses the thoroughness of health promotion in Community Health Clubs compared to other studies.

Section.10.7. shows how the cost of the health promotion through Community Health Clubs compares favourably with two other studies in terms of cost-effectiveness.

Section.10.8. analyses why extension workers are motivated and how much support is needed to enable them to be effective.

Section.10.9. compares the varying results from Tsholotsho and Makoni Districts and summarises variables that have affected adherence to recommended changes.

Section.10.10. interprets data from twenty individual interviews showing reasons for the success of the CHC Model, based on McClelland's (1987) concepts.

Section.10.11. provides an adaptation of Maslow's Hierarchy of Needs (1953) for rural women in Zimbabwe using results from the pair-wise ranking exercise.

Section.10.12 shows how the CHC Model meets Nutbeam's (1999) three criteria of a theory.

10.1. CHECKING FOR RIGOUR

It is important that the intervention study in this thesis meets the same standards of scientific rigour applied to other studies (Loevinsohn, 1990, Cave and Curtis ,1999, Ahern, 2000). The following is a summary which makes a rapid check on the eleven characteristics of a rigorous study proposed by Loevinsohn (1990) (See Section 2.2. Table 2).

- The 1st Criterion states that for a study to be considered rigorous it should be based on *'explicit theory'*. The Community Health Club Model falls within the Community Development paradigm (See Table 1) that endorses a horizontal and holistic approach to health promotion as an entry point into a full process of development. The intervention model draws on some classic ideas from Durkheim (1895), through Weber (1904), to modern Social Epidemiological theorists of Social Capital (Coleman,1990; Putnam,1993; Kawachi and Berman, 2000). In psychology and social-psychology, diverse influences have provided inspiration (Freud,1918; Murray; 1938, Maslow, 1953; McClelland, 1967; Bandura, 1977,1986; Azjen and Fishbein, 1980). The approach is based on sociological theory outlining a mechanism of change, presented in the Linear-Cyclical Model of Habitual Behaviour Change (See p.96. Section 5.1.3, Fig. 4,). The emphasis on the need to adjust values and norms to be more compatible with the demands of society categorises it as a Modernisation Theory (See p.50, Section 3.1.1), and in sociological terms it can be positioned from a Functionalist perspective (See Section 3.1.1).

- Regarding the 2nd criteria, which states: *'adequate description of how the study was adapted to local conditions': t*he training methodology used for the health promotion sessions in the intervention was an adaptation of a standard method which was developed regionally to transfer knowledge related to water and sanitation and hygiene known as PHAST (See p.109, 5.5.1. and p.129, Section 6.4.1). Locally produced training materials were thoroughly pre-tested within the local Zimbabwean culture to ensure complete compatibility with the target population.

- The training method has been described at length in Chapter 6, whilst examples of training materials are shown in Annex 16, and this meets the 3rd Criterion which states: '*adequate description of materials or educational processes employed'*.

- The 4th Criterion requires *'adequate description of resources required to carry out the educational process'*. Cost-effectiveness is analysed in Section 6.7.

- Whilst the 5th Criterion requires a *'measured outcome before and after the intervention'* a case-control method has been used instead for the quantitative survey. For the qualitative data, there was no control group but seven Health Clubs were sampled and 20 individuals interviewed.

- Loevinsohn requires in 6th Criterion, that the study should be at least one year after the end of intervention. Whilst the initial quantitative data in this intervention were taken only six months after the intervention, the qualitative data were taken three years after the intervention had ceased. In addition 65% of the population in Tsholotsho, and 30% in Makoni had completed training over a year prior to the study (See p.232, Section.10.7).

- The Community Health Club Model is intrinsically a community-led intervention and this meets Loevinsohn's 7th criteria which states: *'evidence of community participation in design, goals or outcome measures'*.

- As deemed essential in 8th Criterion, the research has included a positive outcome,

- The 10th Criterion requires p-values and these have been included for all household observations and levels of health knowledge.

- The main focus of the study shifted towards the qualitative data to provide community explanations for the quantitative data therefore statistical regression required by 11th Criterion, has not yet been completed. This will be revisited when time permits more in-depth analysis (See p.254, Section 11.6.1, Future Research).

Thus ten out of the eleven criteria of the characteristics useful for academic rigour are to be found in this study. This 'score' should ensure that it can be used in comparative analysis with other health promotion programmes.

10.2. FOLLOWING THE OTTAWA CHARTER

10.2.1. Five Main Themes

The Ottawa Charter (1986) stressed five main themes, and these have all been followed within the intervention as summarised below:

1. **Importance of equity**:
   Gender equity stressed: although women are in the majority, it is made clear to the community that *Community* Health Clubs are not just for women; men as well as women of all ages, education levels, and religions are equally encouraged to join.

2. **Community participation in decision-making**:
   Uses the basic participatory PHAST methodology to develop informed decision-making, but takes it a step further within a more structured context of weekly sessions and practical application monitored by the Health Club members, using membership cards as a community contract.

3. **A multi-sectoral approach**:
   Four stages of the Community Health Club Model set across the Ministries of Health, Education, Agriculture, Forestry, Water, Rural District Council, District AIDS Council and District Development Fund

4. **Appropriate technologies**:
   VIP Latrine (See p.134, Fig 13), protected family wells, *badza* stand (p.135, Fig. 15), hand washing facility, interlocking blocks for latrine lining (p.135, Fig. 14), alternate composting latrines.

5. **Emphasis on health promotion**:
   Uses health promotion as the entry point, a six month training which developed common unity and from which all other activities stem.

10.2.2. The Determinants of Health

In order to address the determinants of health the Community Health Club Model has followed the Ottawa Charter's five principle guidelines for health promotion:

1. **Reorienting health services**:
   EHTs have changed their training methodology and use participatory methods, have good training materials and are mobile. They have become facilitators

rather than health inspectors and are known and respected by the community. They have empowered communities to take over many of their duties (cholera alerts, monitoring sanitation levels, providing statistical information, ensuring communal water supplies are clean and maintained).

2. **Creating supportive environments**:
   CHCs provide a safety net for other members and assist terminally ill, disabled, HIV/AIDS, widows and orphans in the neighbourhood.

3. **Enabling mediation and advocacy**:
   Women as a group are able to lobby, many have become local leaders and trainers and represent Health Clubs at district and national level at agricultural shows, world health days providing information on herbal remedies, drama, and health songs.

4. **Developing personal skills**:
   CHCs have been instrumental in training in effective home management, prevention of disease, knowledge of herbal cures, literacy, book-keeping, leadership skills and training in a range of skills (bee-keeping, oil pressing, sewing gardening, carpentry, paper making etc.)

5. **Strengthening action:**
   Women within CHCs have become empowered and increased in self-efficacy. They have the confidence to achieve their tasks, and are high achievers, setting realistic targets and effecting change. In group action on two occasions CHCs have influenced voters to remove obstructive councillors. Many women within Health Clubs are now district trainers and leaders.

The main message of the Ottawa Charter is that to combat disease, the structural issues in society have also to be addressed in a horizontal approach to health promotion. Despite this clear focus on the determinants of health, many interventions continue to pursue a vertical strategy which can only superficially address the disease in question. Whilst there is a case to be made for vertical interventions for eradication of diseases such as poliomyelitis, neonatal tetanus, dracunculiasis and Chagas disease, there is less justification for interventions seeking to control diarrhoea as this is largely affected by hygiene levels and has multiple transmission channels. Vertical programmes are often favoured as it is easier and more persuasive for funding purposes to measure a significant improvement in one disease than a general improvement in many (Cairncross, 1997).

The absence of studies which are both rigorous and horizontal has tended to skew the health promotion sector in favour of research methodologies that have met the required academic standard, rather than those studies that have served the community best. An example of this problem is a study on a malaria campaign in Guatemala (Kroeger, 1996) where a 93% level of uptake was claimed; this study which did not feature in any of the top fifteen studies selected by the three reviews (Loevinsohn, 1990, Cave and Curtis,1999; Ahern, 2000). On the other hand, a heart disease campaign using a social marketing programme in California (Elder et al., 1998) that was not able to give specific quantifiable positive outcomes was accorded 'rigorous' status (Cave and Curtis, 1999) although the crucial criteria 8 (Loevinsohn, 1990) was missing. In the final analysis it is surely interventions that have the most measurable positive impact on the target population that should be highlighted and replicated. It is therefore important that horizontal studies ensure good reporting and meet the required standards of rigour, and to that end this research has been conceived.

10.3. BEHAVIOUR CHANGE IN CONTROLLED STUDIES

The significance of levels of behaviour change found in this study can only be fully appreciated when compared to what has been achieved in various other health promotion interventions. Compared to many rigorous studies cited earlier in the three main reviews (Loevinsohn, 1990; Cave and Curtis, 1999, and Ahern, 2000), this intervention has successfully used a wider range of target behaviors and has had more intensive contact with the target population (See Table 5, Section 2.7.2.). Most compliance rates in cited studies referred to only targeted one risk behaviour and changes recorded 20% or less. One study which has been compared to the Community Health Club Approach in terms of innovative health promotion in Africa (WSP, 2002) is provided by Borghi et al. (2002) in a hand washing promotion programme in Burkina Faso. This Social Marketing study calculated the cost of an 18% increase in handwashing (with soap) after handling children's faeces and a 16% improvement in handwashing after using the latrine, at $8 per household. Two other targeted behaviours increased marginally: 8% for use of potties, and 4% for safe disposal of faeces (See Section 1.6.4.).

The two studies most comparable to this intervention in terms of percentage behaviour change was firstly by Stanton and Clemens, (1987) in which 49% of one practice increased in a diarrhoea intervention in Bangladesh; secondly by Tayeh & Cairncross (1996) who found a 56% increase in use of filtered water in Ghana. Also comparable (because of its more comprehensive training methodology) is the intervention by Torun

(1982) in Guatemala who found a 33% behaviour change. Kroeger (1996) recorded the highest rate of behaviour change of all cited studies, at 93% after an interactive and innovative health promotion campaign against malaria.

The only study where a broad range of behaviours was measured was a study of risk behaviour in Community Health Clubs in Bikita District in Zimbabwe, (running concurrently with the Makoni / Tsholotsho intervention; See Section 6.1.3), the authors found a range of between 5% and 35% change for 16 different risk behaviours after a six month health promotion intervention (Mathew and Mukuwe, 1999; Mathew 2004).

The Community Health Club intervention achieved similar compliance rates or better on the majority of 20 different indicators. In Tsholotsho there was a 45% improvement in a mean of 18 indicators (with 16 being highly significant with $p < 0.001$), while Makoni with 21% mean of 14 indicators (with 10 highly significant), showed itself to be half as effective as Tsholotsho. This would appear to reflect less the inability of the intervention to create change than the fact that those behaviours recommended had in many cases already been common in both control and CHC areas. This was attributed to previous health promotion over the years prior to intervention, whereas in Tsholotsho this was not the case. Nonetheless a mean of 21% for 14 observations is higher than most other comparative studies.

10.4. CHANGES IN HEALTH AND HYGIENE KNOWLEDGE

Of the fifteen rigorous studies reviewed by Cave and Curtis (1999), Ahern (2000) and Loevinsohn (1990), the only study which gave explicit information on levels of health knowledge was Pant et al (1996) in a malnutrition intervention in Nepal, reporting 48 aspects of knowledge of good nutrition. It was also the only study to mention literacy levels, which is essential in order to compare the appropriateness of the training methodology with other interventions. Because of the absence of this critical information in the selected rigorous studies, two other comparable studies (which were not selected by the reviews above) were used to provide comparison for this study (See Section 2.9) : Kroeger (1996) who reported a 34% increase in health knowledge of three main messages on malaria in Guatemala and Mathew and Mukuwe (1999) in Bikita, Zimbabwe. The latter measured an unprompted knowledge of risk behaviours in ten subjects, comparing Health Club members to a control group and found an average of 15% difference between knowledge of risk behaviours in the club membership compared to non club membership, after a six month intervention of weekly health sessions. As noted above (See p.122, Section 6.1.3), the Bikita programme was a replication of the Makoni Pilot Study, which had an identical methodology and content of training (Mathew, 2004).

In Makoni District (See p.162, Section 8.2.1; Table 23) the difference between *good* knowledge[39] in Health Clubs members and the control showed a range of 35% to 9% in ten topics, whilst in Tsholotsho District members levels of good knowledge in the clubs were significantly higher than the control in all topics ranging from 49% to 51% higher than the control group. These findings should be sufficient to demonstrate that members of Community Health Clubs were *highly* receptive to a *wide* range of information involving over 50 main messages. This puts in doubt the efficacy of the recommendation to use only *a* few simplistic key messages (Loevinsohn, 1990), as being the most effective means of providing health promotion. The research suggests that the rural communities may have moved to a higher level of understanding than was found in the 1980's when levels of literacy were much lower in most countries.

10.5. DEMAND-DRIVEN SANITATION

The Community Health Club model can provide the necessary community mobilization to effectively create demand-driven sanitation as well as inducing high levels of behaviour change. Like the village cleanup programme in India, where villagers are shamed into a concerted drive to make their village a faecal free environment (Khan, 2004), the Community Health Clubs enable a village to work together to achieve zero open defecation. It has been found that at least half of each Health Club can be expected to build latrines within a year after sessions start. It has also been shown that 100% safe sanitation can be achieved within six months if cat sanitation is used by those who have not as yet been able to build latrines, usually due to programme constraints.

10.5.1. Faecal-free environment in Tsholotsho communal lands

The use of 'cat' sanitation in the absence of latrines was a new recommendation which proved highly acceptable to the community (See Section 6.6). In Makoni, this practice increased by 14% in spite of the already high sanitation coverage, and in Tsholotsho cat sanitation was adopted by all the 57% of respondents without latrines. By contrast it was not in evidence anywhere in the control area.

10.6. THOROUGHNESS OF INTERVENTION

As discussed above, some researchers may subscribe to the idea that a minimal amount of knowledge is needed to effect behaviour change. The perspective of this intervention is that only by constant reinforcement of different aspects of hygiene can the whole picture of health be painted for the community, who will then take on, not just

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[39] *Good* Knowledge means that the respondent knew the cause, transmission and prevention of a condition

isolated practices relating to each particular disease, but a whole *modus vivendi* which addresses all the essential hygiene practices necessary for prevention of infectious diseases. In other words they will have adopted a 'culture of health.'

The achievements in the Community Health Clubs relative to other interventions support this thesis. Looking at comparative studies, (See Section 2.7, Table 5) there is a slight pattern showing that interventions with only a few face-to-face interactions record fairly marginal levels of behaviour change, whilst those with intensive and repeated interactions achieve higher rates of behaviour change. This increase of behaviour change over time, was also demonstrated in one particularly successful study which over a period of twenty months promoted exclusive breast feeding in Mexico (Morrow et al.,1999). Weekly classes for two months were given to a group of mothers followed by home visits for a further eighteen months. The follow-up visit in the third month showed adherence levels of 62% as against a control group's 24% adherence. This increased to 80% by the time of a visit in the sixth month, which may indicate the importance of constant reinforcement until practices are sufficiently well established so as to become habitual.

10.7. COST-EFFECTIVENESS

Sceptics may point to the costs involved in undertaking a health promotion programme that involves weekly meetings for six months and an array of training materials, as well as a fairly sophisticated training methodology using participatory activities. However these fears can be allayed by the fact the health promotion in Community Health Clubs proves to be cost-effective, not only in terms of value for money (number of outputs) but also in terms of inputs (cost of training). As noted in detail (Section 6.7.1) the cost of health promotion was US$ 24,395 and this was 20% of the total budget. Including capital costs it is estimated that the health promotion cost US$ 5.51 per household in the first year and US$ 2.13 in the second year. This compares favourably with the few other interventions, which have provided a cost analysis: Pinfold estimated to achieve hygiene in the home in Thailand at a cost of between 66c to US$1.27. The cost of the programme in Burkina Faso using social marketing through street theatre and radio as well as some house visits, was estimated at a cost of US$8 per household (Borghi et al. 2002). However it is probably less important to measure the *cost* per household than to measure what each household is likely to receive for this cost. The latter depends of the thoroughness and breadth of the intervention.

10.8. MOTIVATION OF EXTENSION WORKERS

Despite initial fears that this approach would be too labour-intensive, Environmental Health Technicians (EHTs) in Zimbabwe implementing this intervention have all reported that Health Clubs have eased their workload. They coined the expression 'the supermarket approach' to describe how, as with a 'one-stop shop', all their business could be done at one meeting, avoiding the usual time-consuming rigmarole of seeking out individual community members for various reasons. Other government ministries also took advantage of the weekly Health Club meetings to make their own announcements. The ease with which the extension workers were able to train communities can be attributed to a large extent to the fact that a large 'tool kit' of visual aids had already been developed, and training in PHAST was thorough. Trainers reported that the ready-made visual aids had been an easy tool to use in participatory activities and the few who were sceptical at the training became converted to the approach once they had tried it in the field and found how well the community responded.

EHTs became more popular with the community and were driven by job satisfaction to meet a highly demanding schedule of training in a different club every day. Some EHTs were known to have honoured training commitments with clubs even during their annual leave. Enjoyment at running the sessions, and strong community appreciation of their efforts, was a key aspect of their success. Many EHTs became so popular with their members that they posed a threat to the local councillors, though most of these were quick to support the approach, seeing its potential for winning votes.

The provision of a reliable motorcycle was probably the most effective material incentive for the EHTs, although they were also given a nominal lunch allowance as well. Monitoring was done largely by the members themselves, who signed the travel claim forms for the EHT. The staff of the Ministry of Health and the NGO at district level met the EHTs only at monthly meetings. The NGO was active only in the initial one-week training, in setting up the reporting systems, and in monthly meetings. Only one NGO project officer was in each district, supporting the Ministry of Health, mainly by providing transport to monitor and attend graduations.

10.9. VARIABLES AFFECTING ADHERENCE TO RECOMMENDED PRACTICES

The data show that Community Health Clubs can, under typical conditions, achieve high levels of health knowledge and hygiene behaviour change across a wide range of interventions, but this is not necessarily always the case. Tsholotsho consistently

achieved higher levels of behaviour change than Makoni. A number of variables could explain why Tsholotsho was more receptive to change.

During discussions held with Ministry of Health staff to analyse the differences between the results in the two areas, it was strongly suggested by EHTs that the main difference between the districts is that the women in Makoni are full-time farmers and have far heavier agricultural demands than in Tsholotsho, where the Ndebele were traditionally cattle herders, and where most women live from their husbands' remittances. This is borne out by the results that show 38% of women in Tsholotsho, but only 4% in Makoni, are dependent on their husbands' income. By contrast, 67% of women of Makoni are joint breadwinners and spend most of each day in their fields for much of the year, and cannot always attend to the high level of hygiene recommended in the clubs. In arid Tsholotsho, where farming is difficult and cattle are the basis of subsistence, only 15% are joint breadwinners. Therefore it is surmised that these housewives have more time to keep their compounds clean and attend to hygiene recommendations, and this is also reflected in the high investment of their time in the decoration of their kitchens. The 41% increase in the prevalence of nutrition gardens, despite the arid nature of the area, indicates the strength of the club activities. Women's time is an important determinant of their ability to adopt healthy behaviour in many settings (Leslie, 1989).

The outstanding variable is the *extent* of the intervention in each district. The Ministry of Health was most active in Makoni where the project extended throughout the district and the methodology was fully entrenched. In Tsholotsho, only three EHTs in three of the District's 19 wards were involved (See Section 6.1.2, Table 14), and they deliberately restricted themselves to a maximum of seven clubs per year, whilst in Makoni District, EHTs responded to the demand, splitting clubs when they became too large. EHTs in Makoni monitored an average of 17 clubs each in three years and thus could do fewer home visits than in Tsholotsho. Thus overextension and a shortage of EHT time could account for the lower compliance in Makoni.

The MoH offered the EHTs little supervision in Tsholotsho, yet this area achieved the highest rates of adherence. With 17 different EHTs in the two districts, it may be imagined that their level of commitment would vary and affect the success of different clubs they facilitate. However all the EHTs, with only one exception[40], were remarkably dedicated to the programme, investing far more effort than duty demanded. If the Hawthorne Effect had been a factor that influenced productivity, it should have produced better results in Makoni, where the Ministry of Health was more supportive and there was regular outside interest, rather than in Tsholotsho where there were

[40] Only one EHT out of 17 took advantage of the motorbike provided to spend most days away from his station .

seldom visitors. It would appear their popularity with the community was more of an incentive for EHTs to perform than incentives and supervision by their superiors.

Tsholotsho is the more underdeveloped area and in the three intervention wards, this was the first water and sanitation project since Independence in 1980. Therefore it is reasonable to infer that people may be more motivated and willing to invest more time and effort in marginalised areas, than in areas like Makoni where donors have been more plentiful, and their assistance taken for granted. If the area is one where many interventions have been operative for some time, it is evident that initial hygiene standards may be higher and therefore the difference between the groups will be smaller. There is also a heightened interest in an intervention and stronger willingness to comply if there has been no similar intervention before in the area.

Another variable, which may affect the level of adherence, is the energy and leadership quality of the facilitator guiding the Health Clubs. Gender may also be an important issue in cost-effectiveness. Whilst there were only three women out of seventeen EHTs in the Zimbabwe study, they showed better use of resources[41], and in one particular case achieved outstanding results relative to other areas in behaviour change[42].

10.10. REASONS FOR SUCCESS OF THE COMMUNITY HEALTH CLUB MODEL

Answers as to the main reasons that Community Health Clubs have been so popular were sought from Health Club members themselves in a series of 20 individual semi-structured interviews (See Section 9.1). This was also reflected in group pair-wise (See Section 9.2) ranking evaluation of perceived needs, and how well these needs had been met by Health Club activities.

10.10.1. The Need for Affiliation

The hypotheses in the model had been based on a number of key guidelines which had been garnered from the author's working experience in the rural areas with women's groups in the past thirty years in Africa, as well as from sources in the literature which had fitted with the theory. The underlying behavioural mechanism which informed the model was the idea that there was a strong 'need to conform' within Shona and Ndebelele society (Gelfand, 1984; Kriel, 1971), and that the Health Clubs provided a public forum for the increased use of subjective norms to influence behaviour (Ajzen, 1988). Without assigning values this was explained by an analogy to two different but equally valid survival strategies in nature: of herbivores, who rely on

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[41] All three women maintained their motorbikes better, and rode more carefully and used less mileage than male EHTS.

[42] This may have been partly why Tsholotsho has noticeably higher achievements than Makoni

co-ordinated group action, and of carnivores who rely on individual action (See Section 5.1.3). Community Health Clubs sought to influence people in a co-ordinated group so that changes were approved by group decision rather than expecting each individual to take personal decisions (See p.98, Section 5.2.2). As the margin for failure is small in poor households, individuals are wary of taking risks until interventions have proved reliable and cost-effective. With group endorsement, individuals were prepared to undertake change without fear of failure. It also minimised levelling mechanisms that have in the past undermined efforts by individuals to break with the common wisdom (See p.99, Section 5.2.4). The fact that health messages were reinforced over a long period by peers as well as by authority, was a far more thorough process than had been applied in other health promotion programmes, and may account for the higher levels of change. The clubs sought to build self-efficacy (Bandura, 1986; 1997), which gave members the ability to change with confidence (See Section.5.2.3) This is achieved through group processes and peer pressure as much as by actual knowledge and personal self-discipline.

The findings in the interviews (See Annex 11) and pair-wise ranking confirmed this theory (See Section 9.2). Belonging, the pleasure of being part of a wide group, was ranked second in the communities' hierarchy of needs. In a culture high in the Need for Affiliation (See Section 2.6.1) this was an important attraction of the weekly meetings. The sessions, where song and slogans played a key part, offered an occasion for conviviality and sociability, identified by Kriel (1976) as a pillar of Shona way of life. Mathew and Mukuwe (1999) also note that the joy of sociability was an aspect that attracted members to join clubs in large numbers.

The interviews provided a strong picture of the difference between Health Club members and non-club members. Whilst being a club member does not isolate one from the rest of the community, meetings with non-members tend to be for more functional activities such as funerals. Club members tend to have more in common, and influence all their closest friends to join the club so they can share time and ideas together. There is also a strong sense of superiority within the membership of a Health Club as they perceive themselves to be more progressive, clean, hygienic and empowered and better able to cope better than non-club members. They take the role of teachers, helping non-club members to change; as caterers, insuring good hygiene standards at mass feasts such as funerals; and carers, helping to make the sick and dying more comfortable. It would appear that they are respected and admired by most of their community and that belonging to the Health Club does not undermine their social acceptance.

10.10.2. The Need for Achievement

Underlying the Community Health Club Approach was the recognition that in semi-literate rural communities there is considerable faith in the power of knowledge as a means of breaking the cycle of poverty (Gelfand,1979). It was surmised that the Need to Achieve (McClelland, 1961) which had been stimulated by intellectual activities at school, was an unmet need as girls tend to marry at an early age and become mothers with household demands. The pleasure women found in learning was mentioned repeatedly in the interviews, and it was clear that the weekly Health Club sessions provided an opportunity for knowledge exchange and debate. The appeal of the Health Clubs was largely based upon this cognitive need. This was shown by the value attached to gaining a certificate and the commitment to 20 sessions further enhanced the value as it was considered a worthwhile achievement having taken so long to qualify. By keeping a rigorous standard for the content of the training, the club members were given a sense of identity as high achievers. As there were few material incentives to join the club, it would appear that the appeal to cognitive need was a viable strategy.

The Need for Achievement (See Section 2.6.1) seems to be a latent aspect in women in the rural areas. Given the opportunity, they enjoy competition and readily enter best-home competitions, health quiz, drama and song contests, and most recently netball and Sports Days. An anecdote to illustrate this was a 63 year old who took pride in being one of the fastest runners in the club (See Annex.13. Interview 6).

10.10.3. The Need for Power

Whilst individual women may have little control over a life of rural subsistence (Gelfand, 1971, Ncubane, 1977), as a block they are a powerful lobby in local events, particularly if supported by the traditional birth attendant or Chief's wife. In Dumbamwe ward, Health Club members voted an obstructive male Councillor out of office and voted in a woman leader from the Health Clubs as the new Councillor. Ten Health Clubs have together constructed a Training Centre, raising funds, moulding bricks, cutting thatching grass and paying builders in an endeavour that has taken four years to achieve at a time when Zimbabwe is in economic decline. The activities and the planning that is currently taking place within Health Clubs, as evidenced from the interviews, shows how women can organise themselves to survive in a time of national crisis. Soap-making groups that could easily have given up as there was no tallow to make soap, have converted into soap-trading groups, buying and selling over forty bars of soap a day in the area. The ability for women to earn an income has been the key to the increase of the power that many women now enjoy, as their husbands respect their

skills and value their financial contribution. Control of resources is a crucial aspect of power and many CHC women have become controllers within their homes. The sense of respect that is often achieved by being a successful graduate in the Health Clubs has given women the confidence to bring about change in many other areas. Self-efficacy is accompanied by hard work and reports of levels of income being made in a time of national emergency would be hard to believe, were they not backed up by project reports, gathered monthly from Ward Co-ordinators (See Annex 2c for income generated in 2004).

It is surmised that an archetypal 'Good Woman' as a role model in Zimbabwean society may have developed during the past century of Christian and philanthropic influence (See Section 3). Following their mother's experience in colonial times, many modern women may continue to aspire to this ideal: that of the respectable, church/club-going woman. It is surmised that the Community Health Clubs have continued in this philanthropic tradition and reaped the benefit from these colonial efforts. The colonial discourse which played a strong part in conditioning modern values of smartness (Burke, 19960) has now, in post independent Zimbabwe, assumed an almost nostalgic need for lost standards. Although the school curriculum was reformed after Independence to be more sensitive to local culture, colonial English values have continued to be perpetuated through teachers and church leaders, in what continues to be a parochial society. The importance of respect from the community and from the family, and in particular the in-laws, is still one of the core values in a changing society. Health Clubs have helped women gain this type of respect and enabled them to emulate the archetypal role model of a Good Woman. It is clear from the interviews that many women feel that they have *'become somebody'* from their association with the clubs and that they do not feel *'just dumped'* in the rural areas (See Annex.11. Interview 4).

An observation which would not have shown up in the individual interviews or the pair-wise ranking is the change in eating arrangements in the home. This is particularly interesting from an anthropological perspective as the normal arrangement in Zimbabwe is for women and children to sit on a mat on the floor, whilst the father has a stool or bench along the right hand wall as one enters. This 'traditional way' has been abandoned in some homes. Women have molded large clay chairs, more like thrones along the walls in their kitchens, often conspicuously labeled 'Father' and 'Mother' seated alongside each other on the same level. Often there is also a bench for the children, with a small table in front of each, with hand crocheted mats carefully laid out. This elevation of women to be on an equal sitting arrangement with the husband is a highly significant indication of the self-assurance that some women have achieved. Rather than the servile maid, they are on a par with their husbands for all to see.

10.11. THE HIERARCHY OF NEEDS FOR RURAL WOMEN

10.11.1. Changing Maslow's Hierarchy

The Hierarchy of Needs (Maslow, 1953), is used as a heuristic device to compare basic categories of needs of the target population so that these could be ranked according to their perceived importance, according to the participants. Whilst this has provided considerable insight into significance of the intervention to those who have benefited, is not intended that the findings should be taken as an accurate description of the actual reality of the observed population, nor does it claim scientific accuracy of measurement, as it assigned an estimated quantitative value to an essentially qualitative felt need. The method was devised to enable some sort of comparison to be made between needs which were selected in a pair-wise ranking. Maslow's theory proposed that needs can be ranked in a hierarchy of prepotency, so that as one need is satisfied, the next up the scale becomes salient. He placed the needs in order from those he perceived as the most basic to those he assumed were more sophisticated: Physiological, Safety, Belonging, Esteem, Cognitive, Aesthetic and Self Actualisation (See p.54, Section 3.4). This intervention prompted the author to find out if the order of needs, surmised by Maslow, was in fact the order which would be selected by rural women in the Health Clubs. In addition, Maslow's thesis had been developed based on industrial society in America, and with little other experience he had at that time questioned whether the Cognitive Need was salient in uneducated people. It was thus interesting to attempt to update his thesis, based on community perceptions, and to apply the Hierarchy of Needs Model to rural areas in Africa.

An exercise was done in ten Health Clubs, (See Section 9.2.2) in randomly selected wards where all four stages of the CHC Model had been followed. The members were asked to provide ten ways in which their lives had changed as a result of the weekly health sessions. By a process of pair-wise ranking, it was possible to establish the order in which the clubs have met the needs of the club members. This was as follows: Highest ranking was Safety (32%); Cognitive (30%); Belonging (21%); Physiological (9%), Esteem (5%), Aesthetic (3%); and Self-achievement (.001%). The variety of responses were then sorted publicly into the seven categories in the Hierarchy of Needs as provided by Maslow (1953). The whole group was then asked to vote on each pair of variables as to *'Which is the most important'*. The strength of the verbal group response was taken as a vote. This provided a remarkably direct indication of the thinking of the group. It became rapidly apparent if there was ambivalence, and if the group was undecided a vote was taken by raising a hand. The results of this pair-wise comparison showed the following ranking: Safety (21%); Cognitive (20%);

Belonging (17%); Aesthetic (12%) Esteem (11%); Physiological (10%) and Self Achievement (9%). This shows the same order for the top four 'needs', although Physiological has been demoted, and more value placed on Aesthetic, Esteem and although Self Achievement has been placed last, it has gained in support.

There was some confusion over the question between whether the people were being asked 'what is most *important* to them' (in terms of identifying their needs), or 'what has the Health Club *done* for you' (an evaluation of what has already been achieved) and it cannot be said that this is a *quantifiably* accurate picture of sentiments within the club membership. The problem is that the exercise takes a *value* which is essentially a *qualitative* measure, and ranks it according to a vote which is *quantitative*. This vote may not be accurate given the public nature of the process and the interview bias that may have arisen when the exercise was carried out with personnel associated with the intervention. However, those reservations aside, the exercise did give a flavour of the needs and how the needs had been satisfied within the Health Club intervention.

10.11.2. The Cognitive Need

What does seem clear is that the Cognitive Need, the need to know and learn, is a high priority in the rural areas and that this need was more than adequately met by the intervention, as evidenced by the many positive responses to the question: *What were your reasons for joining the club?* Whilst eleven mentions were made of the need for knowledge, there were eight mentions of social reasons, four mentions linked to self improvement, three mentions of hope for material gain and improvement to home, and three mentions of curiosity, just wanting to know what was going on in the Health Clubs (See Annex 13.1.1). This research also answers Maslow's question as to whether uneducated people have this need and whether it becomes salient when other needs are more pressing. It would seem safe to surmise, on the basis of the findings in the interviews, together with the voting in the pair-wise exercises, that the Cognitive Need is largely unsatisfied in the rural areas and that the Community Health Club has met this need. However, it may also be a circular argument; that the activities in the Health Club have stimulated the Cognitive Need because there was the possibility of the Cognitive Need being met once weekly health sessions were a feature of life in the village. If this is the case, that the Health Club can *awaken* a cognitive need and then *fulfil* it, then this is a valuable strategy for attracting rural women.

10.11.3. The Physiological Need

For example, one would surely expect to find that in an area of subsistence farmers with regular food shortages, unsafe water and poor sanitation that these physiological

needs would be salient. Instead we find the opposite: that Physiological Needs are identified by the community as being less important than Cognitive and Safety Needs. The Physiological Need was supported by only 9% of votes in the first round and 10% of votes in second round. This can indicate one of two things: either those needs are provided for already with adequate food, water and sanitation, and the people are sufficiently comfortable to invest in other activities higher up the scale; or the needs are not provided for, but they are considered relatively less important. It would appear that as there is considerable hardship in this area, the latter is more likely, and that a programme which can offer intellectual stimulation will be popular with the community, despite lack of provision of material assistance. This is an important finding as it means that the popular conception that subsistence farmers are primarily attracted only if an intervention can provide material benefits may be a mistaken reading of their prime motivation.

10.11.4. The Safety Need

Another important observation to highlight is that Safety was placed first on the scale, rather than Physiological Needs, as surmised by Maslow. This was interpreted as 'protection from disease and misfortune'. Many felt Safety had been provided by information which enabled people to deal with disease effectively in the home. In addition the home-based care intervention had provided concrete support to families living with HIV/AIDS, and instruction on the propagation of herbs, was one of the most appreciated aspects of the intervention. There was also a recognition that the increase in good nutrition from the many gardens had made families healthier and also brought in an added income. The aspect of a social safety net within the club also fell under this category, as it was verbalised repeatedly that members help each other when in need, particularly with funerals or when neighbours are ill. This safety net relieves much of the stress of rural livelihoods, which depend on being physically fit to work. Thus, as Safety was an umbrella for many other needs, it was voted 32% the first time and reduced to 21% after some rethinking of the definition. Similarly, Belonging is voted high the first time at 21%, and then 17%. It appears that sometimes the two categories were slightly interchangeable: safety often entailed a sense of being able to rely on neighbours which could be also classified as Belonging. However there was a strong appreciation of the opportunity that had been provided for a weekly social event which enabled women in particular to come together and share problems.

The high value put on Safety and Belonging may have implications for the work being done on Social Capital (Kawachi and Berman, 2000), as the community may have identified high levels of trust and strong social networks as prerequisites for a healthy community. The underlying strategy of using Community Health Clubs to develop a

'culture of health' within a community, is based upon a need for common unity of understanding and purpose between members of the community so that they can initiate and manage their own health without being undermined by destructive elements in the village. This means that ideas must be shared, and that intervention must promote unity rather than competition and division. By constantly reinforcing key messages on a weekly basis people get to know each other, and slowly trust is developed and networks are expanded. By extending their own personal networks people have more resources to call upon, because they can barter their own services and favours with others. This is a form of personal insurance that is used by peasant societies throughout the world, as it compensates for material security that is the way the wealthier class of society insulate themselves from misfortune. Social networks eventually contribute to Social Capital. This is a concept that is increasingly being used to account for the level of social security within a society. Kawachi and Berman (2003), have demonstrated that states in N. America with high Social Capital have fewer cases of heart attack because anxiety levels and personal stress which cause these conditions are lower. Social Capital is measured in terms of the level of trust within a given society. Social Capital, unlike financial capital is not individually owned. It is like a public fund of goodwill that can be used to cushion those that draw on it. However its defining quality is that it is a public good, rather than a private possession. This means that even those who do not contribute to developing it may benefit from its existence. Kawachi and Berman (2003) give the example of voluntary work by a parents-teachers association of a school, that may raise the quality of education at a school, so benefiting not only the parents' own children but also all the other pupils. It is therefore the spill-over of improvements that can be accessed by the needy in any society. Similarly, the operation of an effective Community Health Club in an area should benefit all those living in the area whether they are members or not.

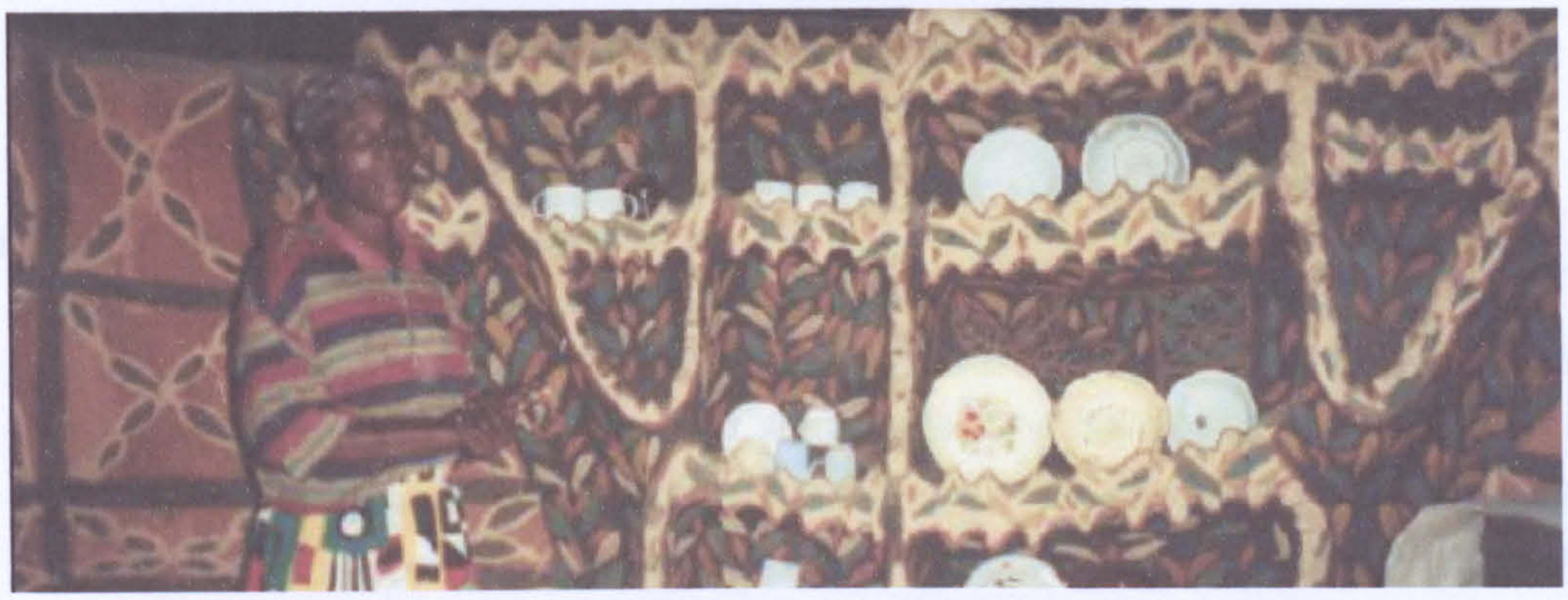
10.11.5. The Aesthetic Need

As was originally surmised by Maslow, (1953) the Aesthetic Need will not be salient until other needs have been met. Beautification and decoration of the homestead is less important if there is an absence of food. Although the Aesthetic Need was not ranked highly at the community evaluation, there were signs of a strong aesthetic need when individual homes were visited. Women went to enormous efforts to decorate their kitchens, improve their homesteads and dress smartly. Best-home competitions had prompted a range of home improvements which were largely for aesthetic rather than hygienic reasons.

The level of decoration found within kitchens, particularly in Tsholotsho, reached heights that many experienced development workers in Africa would find difficult to

believe (See p.243, Fig. 18). Within each kitchen hut the central fireplace has often given way to a new fuel-efficient clay stove with an external chimney. Rather than the rough mud plaster, the whole kitchen is either polished to glass finish with black floor polish or burnished with metal, or painted with intricate patterns. One wall has often been molded into clay dressers with niches for rows of individual plates and cups, sometimes studded with bottle-tops or pebbles. The drinking water is carefully covered with fitted lid, with a ladle and cups hanging nearby. Paper is laid on all shelves and sometimes empty boxes and tins decorate the shelves like a make-believe shop. The effect is of a carefully conceived, immaculately maintained, art work.

Fig 24. Kitchen art in Tsholotsho: a richly decorated dresser, molded into the clay wall of a kitchen hut, to display crockery. (See also Fig.22 for kitchen in Makoni)



There is another aspect of human motivation which has been neglected by the Classic Hierarchy of Needs: the Spiritual Need. Given high levels of spiritual motivation and the rapid growth of new church groups in Africa, this is a dimension that should not be ignored. Judging from overt Christian behaviour in the Health Club sessions, it has been incorporated informally into the intervention, although spiritual guidance was not an aspect that was offered in this intervention, as the clubs sought to be as inclusive of all beliefs to encourage a broad adherence.

10.11.6. The Esteem Need

Women who had qualified with certificates felt they were experts in the field of home hygiene and health and also that they were also considered by others as expert (See Annex 13.2.3). A mother who is less educated than her children can suffer from a sense of inferiority and sometimes becomes unnaturally dependent on a child's information from school. There were numerous references to the respect the children now had for their mother (Annex 13.3.1). It appears that children also took an interest in new practices learnt each week at health sessions and were central to helping to

in new practices learnt each week at health sessions and were central to helping to improve standards at home as they took on many of the new practices, such as sweeping the yard before school. It was also clear from the interviews that many husbands have become proud of their wives' achievements. Eight descriptive comments were made on how the husbands were initially resistant to wives 'wasting time' at the club, until they experienced the benefits of a well-ordered home (See Annex. 13.3.1). The husband's parents are also important, as Shona and Ndebele practice virilocal residence. Therefore approval from in-laws is a strong indicator of esteem, and this appreciation was voiced in many cases (See Annex 13.3.3) where daughter-in-law feels she is considered an asset to the family because she is clever, hardworking and does not gossip and waste time. It is reasonable to assume that this respect from the extended family may be one of the reasons that the women in Health Clubs have been so assiduous in their attendance of health sessions and their obvious delight in the certificate they are publicly awarded.

10.11.7. The Need for Self Actualisation

It is likely that there was some cultural restraint in playing down a woman's own needs as she is expected to be selfless and waste little time developing her own talents (Weinrich, 1982). In addition there was some difficulty in the interviews talking about an abstract concept such as the importance of life. However the Need for Self Actualization was determined by asking two questions: *What is the most important thing in your life as a man or a woman?* (See Annex 13.2.2) and *How does the Health Club help you to achieve the things which are important to you?* (Annex 13.2.3). A total of 70% of the responses indicated a women's importance in terms of caring for her family, providing food and good nutrition, promoting health by cleanliness; whilst the other 30% of responses noted the importance in life for self discipline and understanding. More abstract values for self such as the need for a woman's independence and love or happiness were mentioned only three times each (See Annex 13.2.2). Answers provided rich insights into how the Health Clubs have helped women to become more capable in effective care of the family (See Section 9.1.2.6). Gaining knowledge in order to improve home hygiene and prevent diseases was reflected in 35% of the responses, whilst 36% mentioned more tangible home improvements to the facilities in the home often enabled by ability to earn was mentioned in 10% of the responses. Self respect enhanced by husband's approval was also fairly high at 11%, whilst community support was mentioned in 8% of the responses (See Table 36, Section 9.1.2.2). The more abstract the need, the less easy it is to pigeon-hole responses into one category or another. However it is clear that Community Health Clubs, rather than meeting purely material needs, contributed on

many levels to a woman's ability to excel as a mother within her family and this may be taken as a means of 'self-actualizing' within the context of a rural subsistence family.

10.12. ELEMENTS OF A THEORY

Nutbeam (1999) provides three main demands for an effective theory (See Section 2.1). As Chapter 5 provides considerable theoretical explanation of the Community Health Club Model, the following section will purely answer the criteria identified by Nutbeam.

10.12.1. Why the Community Health Clubs activate some people and not others

Comments from the interviews provide reasons why Community Health Clubs do not attract everybody (See Annex 13.5.5). They primarily attract mothers and grandmothers rather than men, and those interested in learning and socialising. From observations made by EHTs, those women who do not join are those who spend some part of the year in town with their husbands, those who are too busy, those who are pregnant or have new-born babies, and the old and infirm. Reasons given by the community are that their husbands prevented them, that they didn't hear about it or that they just were not interested (See Annex. 13.5.5) There was repeated opportunity for anyone to join in most areas either when the club first started, as it was progressing or within each intake every six months. Most villages after two years had included over 80% of households. However there are some areas where there has been no EHT for many years or where clubs have stopped expanding.

10.12.2. Linking knowledge, belief, social norms and behaviour

The Cyclical-Linear Model (See Chapter 5.1.2) demonstrates how habitual behaviour changes through a long-term process: The Community Health Club provides a forum for exploration, which through health education leads to new ideas. These ideas are evaluated in a group through participatory activities and once group consensus is achieved the whole membership resolves to change together. This is how knowledge and beliefs have changed social norms so that, with peer pressure, it becomes uncomfortable to be different. Once new behaviours are adopted, the member once again becomes part of the majority and feels comfortable with the change. As more people change, the pressure from the Linear worldview starts to counterbalance and eventually predominate over the Cyclical worldview.

The design of the health promotion programme of 20 training sessions creates a 'culture of health' by constant reinforcement of key principles of good hygiene. Each

week a different topic is studied and relevant homework is given, to be achieved by the next week. Breaking down the complexity of hygiene into achievable components enables easy achievement without much investment of time, or money in the initial stages. Once capacity for personal change has been developed and homesteads begin to improve, more difficult modifications to infrastructure (water sources) and facilities (latrines) are undertaken as a group. By setting realistic targets, success is achievable and the cycle of failure is broken. A sense of achievement and personal 'Self-actualisation' is a characteristic of effective Health Club members, who unlike non-club members do not fear the consequences of improving, because the changes they make have been endorsed by the group. This means that there is also less Fear of Success (See Section 3.7) as all members can aspire to the same standards of living without being subject to jealous reaction, the Pull him/her Down syndrome (See Table 11, Section 5.3.1)

On an individual basis, self-efficacy has been increased by converting feelings of Low Dominance (sense of uncertainty, inhibition, shame, inferiority) to High Dominance (self esteem, sureness, mastery, pride, capacity) (McClelland, 1985). Respect of in-laws and husbands are important in developing self-efficacy, and these have been augmented by the increased effectiveness of women in the home and their ability to contribute financially has brought increased appreciation.

On the social level, positive cultural strengths have been built upon: the desire for harmonious relations and deep seated values of conformity and consensus which have traditionally been used to maintain the *status quo* in society, are here applied for positive change. By using an appeal that is culturally appropriate, Health Clubs have been endorsed by the whole community, and are often key institutions for informed decision-making within the areas where they operate. It appears that levels of interpersonal trust have developed and the group strength of women has built social cohesion resulting in high levels of Social Capital in the area. Norms of reciprocity and mutual aid have been changed and there is ample evidence of an abundance of mutual support (See Annex 13.15.4)

CHAPTER 11: APPLYING THE LESSONS OF COMMUNITY HEALTH CLUB INTERVENTION AND FUTURE RESEARCH

Whilst it has taken five years to provide a rigorous academic study to show the cost-effectiveness of Community Health Clubs, the intervention continues to have a life of its own, impacting on the lives of over 100,000 people. For research to be of any real value it has to be applied, as soon as possible, to enable real change to take place where it is most needed, in the lives of the poorest in the Developing World.

This chapter looks beyond the immediate study to see how Community Health Clubs can be scaled up within countries where seed projects have already been established and shows how it has already been successfully replicated in Uganda and Sierra Leone. It provides guidelines as to what variables will provide an enabling environment for similar interventions in order to predict hygiene behaviour change and ensure demand-led sanitation.

11.1. SUSTAINABILITY

There has been some scepticism that the author's conspicuous involvement in the field may have been an aspect which affected the high level of uptake in the initial stages of the intervention. At that stage some felt that lack of such personal involvement would affect future replicability of this model. Whilst this may well have been the case in the preliminary field trials, it should be noted that whilst initial training of EHTs was done by the author, further field visits were minimal and as the intervention spread, only the few original wards knew of the author's role. In addition, Health Clubs have been sustained for six years without any input whatsoever from the author[43]. The NGO has continued to monitor developments within the Health Clubs at a distance, with three project officers at district level, but with minimal mobility due to fuel shortages. The Ministry of Health continues to provide health sessions in areas where EHTs still remain. The NGO has been severely downsized as a result of the lack of donors funding and support. Despite the fact that this is a cost-effective method, the major constraint to the scaling up of Community Health Clubs is not lack of community uptake, but the lack of external funding. At ward level, the daily running of activities is conducted by Village Community Workers, the chairpersons and other trainers in each club and supervised by the semi-voluntary Ward Co-ordinators. Community Health Clubs have a life of their own and do not depend on the NGO or Government.

It is surmised that the Four Stage Model (outlined in Section 5.4) has been the key to sustaining activity in the Health Clubs. Those clubs which benefited from additional

[43] The author has been out of Zimbabwe since February 2001, returning once annually to conduct the research.

support for income generation, prior to 2001, have thrived and continue to operate a variety of activities as evidenced in the interviews. Not only are creative ways being found to counter the hyperinflation and lack of employment in a country now dependent on food aid (See Section 4.4), but women in Health Clubs are in fact prospering despite the hardship in the country. There was repeated reference to additions that have been made to homes, despite the economic situation. Furthermore women were providing school fees for children and helping to supplement family income with extensive sales of vegetables, herbs and honey.

Whilst the third and fourth stages of the Model are not the subject of this thesis it is, in fact, these stages which are addressing the *determinants* of health and providing long term solutions to poverty which is the basis of poor health. In addition, most Health Clubs now have a home-based carer to assist women nursing a dying family member, and counselling the family (See Annex 4). The safety net provided by fellow club members has assisted many of the 3,000 orphans and widows in the project areas, by contributions in cash, kind or labour (See Annex.13.5.4). The ability of Health Club members not only to *understand* disease, but also to *prevent* much sickness by improved hygiene has been referred to repeatedly in the interviews (See Annex 11.21) with many claiming to have diarrhoea, skin infections, malaria and other minor complaints under control (See Annex.13.4.1) . In addition the ability to use herbal remedies (See Annex 3) has given a lifeline to many given the lack of drugs in clinics since 2002, as well as the escalating cost of transport and unavailability of fuel nationally which has limited pubic transport in recent years. Income generating projects are also providing an incentive for a renewed round of health and hygiene training sessions (See Annex 2). Membership is rising because it is a policy in all Health Clubs that, for a member of the community to join any other income generating activities, it is compulsory to first attend health sessions for six months.

The sustainability of the approach is demonstrated in Makoni District, by the many clubs with on-going activities which continue to function three years after the end of funding, and that have a life of their own with minimal outside monitoring and no material inputs. There was much reference to the weekly sports that were taking place in and between clubs (See Annex. 13.1.3). Netball and athletics have provided a social outlet, and a reason to meet, in addition to keeping members physically fit. Sport also provides a tension release and builds solidarity. This was a community innovation which has contributed another dimension to the possibilities of using Health Clubs for a vehicle for multiple development initiatives.

11.2. OPERATIONALISING SUSTAINABLE LIVELIHOODS

The multi-faceted development, which is being undertaken in Community Health Clubs, provides an example of a health promotion model, which can build all the five 'capitals' (physical, financial, natural, human and Social Capital) outlined in the Sustainable Livelihoods Approach (DFID, 2000) (See Section 1). The CHC model does in reality, create synergy between capitals so that by strengthening human and Social Capital there is more likelihood of physical, financial and natural capital showing sustained improvements when the Community Health Clubs have done all four stages.

11.3. SCALING UP THE COMMUNITY HEALTH CLUB MODEL

The question has often been asked: *Can a community-based intervention such as the Community Health Club intervention be scaled up to national level, without a dedicated NGO with charismatic project officers in every district?*

It is true that Zimbabwe, at the time of intervention, unlike many other countries, had an effective cadre of Ministry of Health extension staff based at most health centres in the rural areas. The CHC model merely rationalised their existing workload into a more structured programme. With more reliable transport, and with a week's training EHTs could be trained for this programme throughout the country at relatively little extra cost. In Zimbabwe, the Community Health Club Model could easily become institutionalised within the Ministry of Health within a two year programme, as demonstrated in Makoni, Tsholotsho, Lupane and Gutu Districts. This could be scaled up to all of the country's 57 districts.

It is estimated that there are 1,225,740 households in Zimbabwe without latrines (NAC, 2000). To meet the MDG targets and to halve this by the year 2015 would require only 51,072 latrines to be constructed per year. This averages at only 896 per district per year. The experience in Makoni and Tsholotsho has demonstrated that with good support, over 1,000 VIP latrines could be constructed per year through Community Health Clubs in each district[44]. When the Community Health Club approach is adopted and the Ministry of Health field staff are motivated and mobile, with good training materials and logistical support, there is little resistance from the community to improve hygiene and sanitation.

In countries where there is not the same level of Ministry of Health commitment or capacity, the only alternative is to use indigenous NGOs, whose staff would be posted to the operational areas. This was demonstrated in Gulu District in Northern Uganda,

[44] In Northern Uganda, Gulu District, 12,000 traditional pit latrines were constructed within six months

where a local NGO, supported by an external NGO[45], was formed specifically to administer the programme. Within six months a dedicated core of extension workers, had been trained and had started activities in all the fifteen IDP Camps. Ministry of Health were not able to run this programme as they were already overstretched in the area. In Sierra Leone, NGO staff were trained in the absence of Ministry of Health staff, and were effective while they were deployed in the field. However, where possible it is more sustainable to use MoH staff as the disadvantage of using NGO trainers is that they tend to be in place for only a few years whilst funding is available.

11.4. PREDICTING BEHAVIOUR CHANGE

The following considerations affect the applicability of the approach to other developing countries.

1. **Least developed areas**

   The more under-developed the community, the more effective the Health Clubs will likely to be in achieving behavioural changes as the CHCs appeal strongly to illiterate and disadvantaged people, who lack a sense of self-efficacy and respond more readily to change within the context of group conformity.

2. **Low levels in base-line data or in control group**

   Where prevalence of good hygiene behaviour is low i.e. before the intervention (or in the control), very significant percentages of improved sanitation and changes in specific hygiene practices can be achieved.

2. **Any level of illiteracy**

   Contrary to expectations, the approach does not require a certain level of literacy to be successful, although it is targeted at the semi-literate.

3. **Good support to trainers**

   Optimal levels of community support are gained by committed trainers; support to them in terms of reliable transport, appropriate training materials and fair incentives are essential, and these will be the main costs of the programme.

4. **Five clubs per trainer**

   Although the optimal number of clubs that can be managed by one trainer at any one time is around five, this must be weighed against cost considerations. The larger the number of beneficiaries, the cheaper the programme will become, but it may be less effective.

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[45]Health Integrated Development Organisation (HIDO) supported by Care International

5. **More cost-effective over time**

   Once the Health Clubs are established, they can be continued at nominal expense, with minimal monitoring; thus over time the costs per beneficiary fall.

6. **Use of the membership card and certificate**

   The membership card, a clear schedule of training and the public acknowledgment of dedicated members with a certificate, seems enough to attract community support to join Health Clubs, even without immediate material incentives.

7. **Intake renewed over four years**

   Health sessions should be continued until all those who want to join in every village have been given the opportunity; this may involve enrolment over at least four years.

8. **The full Four-stage Model**

   To sustain the life of the Health Clubs, health promotion should lead not only to the implementation of water and sanitation programmes, but also be a vehicle for other initiatives such as income generation, adult literacy, voter education and understanding of human rights, and HIV/AIDS support.

9. **Sustainable Livelihoods**

   Ideally, funding should be sourced from agencies interested in holistic development of sustainable livelihoods rather than short term, emergency interventions aimed at controlling one particular disease.

11.5. REPLICATION

11.5.1. Emergency Sanitation in IDP Camps in Uganda

The Community Health Club Model had only been used in rural areas, and there was some interest to find out if it could be adapted to peri-urban, high density areas. In 2004 the CHC model was introduced into Northern Uganda, where due to ongoing war in the countryside during the past 18 years, 89% of the population of Gulu District is displaced and packed into vast Internally Displaced People's (IDP) Camps, with a population in each camp varying between 15,000 and 64,000. There is minimal sanitation, and the proposed intervention entailed health promotion reaching 120,000 people and provision of 10,000 latrines within six months in 15 IDP camps. This was an ambitious target, but by scaling up the CHC model the challenge was not only met, but exceeded within the time frame and budget.

To provide health promotion for 120,000 people, 120 Health Clubs were needed with a hundred members in each club. At the rate of five clubs per trainer, 24 trainers were required and these new recruits (mainly newly qualified clinicians) were trained within a week. A participatory tool kit was put together from existing visual aids already available within the country, and trainers were posted to the 15 IDP Camps. Within four months, 116 CHCs were started with a total enrolment of 15,522 members, which accounts for 42% of the 36,138 households within the programme area, and approximately 100,000 direct beneficiaries of which 85% completed all 20 health sessions. Secondary beneficiaries included others in the camps who watched the numerous dramas and health sessions without necessarily being regular members. By July, 2005, 1,650 health sessions had been held, with considerable uptake of recommended practices. For example: 3,372 pot racks[46] and 6,020 bath shelters were built as well as 1,552 plastic tippy-taps[47] for hand washing. After six months the target of 10,000 latrines had been exceeded, and by the end of the programme 11,000 traditional pit latrines had been built of which over 2,000 had poly sanplats with covers, and another 2000 had locally manufactured cement sanplats with covers. It is also apparent that diffusion of ideas and practices had affected those neighbours who were emulating Health Club members, thus significantly improving hygiene standards within each IDP Camp (Waterkeyn, Okot and Kwame, 2005).

11.5.2. Faecal-free resettlement villages in post-conflict Sierra Leone

There is also a strong case for using Community Health Clubs in post conflict settings where emergency reconstruction of villages is underway. For example, in Sierra Leone, in 2001, after ten years of civil war, people were returning to their villages in some districts where conflict had been brought under control, and were starting to reconstruct their homes. Open defecation had become a major health hazard, so a programme was introduced[48] into 28 villages under reconstruction using Community Health Clubs to mobilise demand for sanitation, and clean up the environment. The people had been severely traumatised, and it was surmised that the Health Clubs would also provided a forum for interaction and contribute towards developing Social Capital in the villages. Whilst previous Health Clubs had been in Christian areas, this intervention was in a largely Moslem area. Whilst the Health Clubs had their own chairperson, usually a woman, the proceedings were endorsed by the imam in each village, who ensured that *all* homes were represented in the Health Club and that all recommended changes were made mandatory for every household. Unlike the largely Christian Health Clubs in Zimbabwe, 62% of the Health Clubs consisted of men who

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[46] A drying rack like a small table for kitchen utensils made of sticks outside each home, to keep pots off ground.
[47] A local design using a plastic container handing on a frame, with a foot operated lever for tipping out the water.
[48] CARE International, in Bo and Moyamba Districts.

readily joined and participated alongside their wives. In 20 of the villages, every home was represented; in the remaining three villages, due to a policy of limiting the size of the clubs, 92% of homes were represented. There were a total of 1,026 households in the programme of an estimated population of 8,189 in the two districts of Moyamba and Bo. After six months there were 45 clubs with 2,877 members of which 72% completed all twenty sessions.

Project records showed that within six months a faecal-free environment had been achieved with 461 Alternating Composting Latrines constructed and the balance of households practising 'cat sanitation' as had been the case in Tsholotsho (Waterkeyn and Waterkeyn 2002). Although no quantifiable data were available, an evaluation was done by the author using a participatory community review in 19 villages with a village transect walk in each. This indicated high levels of uptake with pot racks, washing lines and well-swept yards everywhere in evidence, while none existed in the non-CHC villages. Although there had been a baseline survey, no post intervention survey was subsequently carried out and therefore further research is needed to track changes in the villages since that time.

These examples provide some indication of the adaptability of the model to different conditions. Whereas in Zimbabwe the Health Clubs were quickly adopted by the well settled, relatively comfortable subsistence farmers, living in their ancestral homes; the model was also appropriate in two conflict zones: the heavily populated IDP camps in East Africa and in Moslem resettlement villages in West Africa. The model can be used in rural and high-density areas, in countries at the bottom of the UN Human Index Scale or in relatively developed areas, with Christian or Moslem groups, and most importantly, it can be used in development and in emergency programmes.

11.6. FUTURE RESEARCH

The research undertaken for this study has answered the basic questions that it set out to explore. It has shown that Community Health Clubs are cost-effective; they are easy to implement for development workers; they are popular, particularly with women in rural areas of Africa, and that most importantly they can achieve significant positive change in hygiene behaviour within a year. The research has also raised further areas of interest, which could provide more detailed insights, as identified below.

11.6.1. Multivariate Analysis on existing data

The full dataset also included Gutu, Bikita, Lupane and Chivu Districts and was initially taken with a view to analysing differences in implementation between districts using CHC Model. However during the course of the research, the focus moved away from this research question and this additional data has not been used in this thesis.

More statistical research also needs to be done with multivariate analysis to determine the optimal length of training: how many sessions, and what length of exposure in terms of time is the most cost-effective for achieving behaviour change. It would appear significant that in Tsholotsho where 68% attended all sessions, the levels of behaviour change and health knowledge were so much higher, as opposed to in Makoni, where only 36% of members had finished all 20 sessions, but this is likely to be due to a number of other factors at district level such as comparative level between the control groups and target population, and prior exposure to health information which varies in each district. At club level, the gender and effectiveness of trainers could account for a range of success between the Health Clubs and at a personal level women's leisure time appears to have been important. This is related to marital status (especially if the woman is a widow) and means of livelihood (if she is supported by her husband or is busy all day in the fields), and may also be linked to income level (if improvements can be afforded). A mother's level of education appears not to have been a major factor in attracting women to join Health Clubs, although the number of sessions she attended and whether she completed the course may be linked to her level of education. Another set of data could be extracted using only the 30% in Makoni and the 65% in Tsholotsho who had completed all training more than a year prior to the research data collection.

11.6.2. Control group for comparison with CHC interviews

Political suspicion of foreigners made it dangerous for the author to go into areas where the project had not taken place. If this had not been the case we would have interviewed people in non Health Club areas, in order to compare levels of attitudes to risk behaviours, understanding of preventable diseases and activities undertaken to prevent disease. It would give more strength to the CHC interviews if they could be compared with what is said by non-Health Club members in the same area. This would also enable more understanding on the outsider's perception of Health Club members and their activities. Once political stability returns to Zimbabwe it is hoped that this will be completed.

11.6.3. Ten years on: a post Health Club phase?

Ruombwe Ward distinguishes itself each time it is sampled as being different in some ways from the other wards: The following are some particular aspects of this ward:

- It was the very first area where Health Clubs were started in 1995.
- The EHT was highly active and started more clubs than any other EHT initially.
- More latrines were constructed in Ruombwe Ward than any other ward; by 202 there were 1,194 latrines in a ward of 2,224 household.
- The EHT joined the NGO and Ruombwe was left without MoH staff for over a year.
- When a new EHT joined she left within six months for study leave and the ward (and Tikwiri Ward) still remains without an EHT (2002-2005).
- The councillor for the Ruombwe was one of the few women councillors in the District.
- The only councillor in Makoni to cause trouble for the CHC programme as it conflicted with her own programme which she started in opposition in 1995.
- The only ward before 2001 to have Stage Three (Sustainable Livelihoods), as paper mills were set up in two villages.
- The only ward to have a Community Training Centre and therefore had a lot more exposure to visitors and publicity.
- Considerably more inputs for start up of income generating projects compared to other wards.
- The only one of ten sampled clubs where the original Health Club structure had broken down, with jealousy between members and executive committee.
- Three district trainers have been selected from this ward due to its development; the District Bee promoter, the District tinsmith trainer and the Ward Co-ordinator / District Nutrition trainer.
- The only Health Club sampled where many members were boycotting the club because the co-ordinator had 'high-jacked' many of the benefits and was favouring her own family.
- Despite difficulties the income generating within families rather than groups is still very active.
- More poverty alleviation appeared to be taking place especially from the paper making and bee keeping activities, although this has not been quantified.
- In the community pair-wise exercise the only ward to mention self actualisation (self achievement) as one of the ways the Community Health Clubs have developed the area.

- The ward with the only consistently decreasing pattern in infectious diseases from Health Centre statistics since Health Clubs first started in 1995 (See Section 3.5)

From the author's first hand inside knowledge it would appear that leadership personalities have contributed to making Ruombwe different from other wards, and levels of Social Capital and trust may not have developed in the same way as in other wards. With more material incentives the opportunities for social friction have increased. More visitors and publicity may also have undermined local self sufficiency. Although community structures appeared weak in this ward, it is probably one of the most prosperous in terms of individual increase of income and decrease of infectious diseases within the whole district.

As a case study this ward needs to be more carefully documented with further research. It is surmised that the levels of hygiene, sanitation and income over the last ten years have been raised through Health Club activities and despite the lack of good leadership, personal circumstances have improved and the ward has moved into a more self-sufficient 'post-Health Club' phase, where common unity and group solidarity is less important as individuals have developed individual strength.

11.6.4. Longitudinal studies in Sierra Leone and Zimbabwe

That the Health Clubs in Makoni District have contributed in terms of health management for the community is clear. However, it is not known how well Health Clubs have been sustained in other areas of Zimbabwe such as Tsholotsho, Gutu, Bikita and Lupane, where Health Clubs were started in 1999 and underwent the first two stages but which have been abandoned for the past six years. A base line survey was done in Sierra Leone on 50 Health Clubs in 2001, and if a post intervention survey could be done, (three years after the intervention) this could be used in a longitudinal study to ascertain if clubs have survived and continue to practice good hygiene. More recently the 120 Health Clubs in Uganda in 2004 have been surveyed both pre and post intervention and these results could be compared with those in Zimbabwe and Sierra Leone. This would provide more understanding of the CHC Model, and provide answers as to whether it is necessary to continue to the third and fourth stage, as was done in Makoni District, in order to sustain the life of a Community Health Club.

11.6.5. The Use of PHAST as a training strategy

As shown in Section 4.7. the general use of PHAST training tools in health promotion in Zimbabwe have shown little results (World Bank-WSP, 2001). As a result the key agency which had promoted this methodology decided after six years it was not cost-effective, and sought to abandon the approach in favour of Social Marketing. Similarly in a recent survey in Uganda where, like Zimbabwe, a pilot project had been set up to use PHAST principles during the 1990's, little evidence of hygiene behaviour change was found (PDG, 2003). However, the CHC Model using structured participation and the same PHAST Tools and methods, has during the same period and in the same country, succeeded in achieving highly significant levels of change. As this study now shows, PHAST *can* be used cost-effectively. Therefore, more thought needs to be given as to how to extend PHAST, rather than to abandon the approach completely (See Section 6.3). The weakness of the opened-ended participatory activities used in PHAST appears to lie, not in the participatory methods, which were also successfully used in Community Health Clubs, but in the fact that trainer's are not given a structured intervention which is properly monitored and evaluated against observable proxy indicators (Waterkeyn and Waterkeyn, 2004). There is a need to reconsider reversing years of development along the PHAST route and conduct an independent evaluation into levels of behaviour change and cost-effectiveness in Community Health Clubs in Zimbabwe and now in Uganda using PHAST training techniques.

11.6.6. Social Capital

In the course of the research, the author came across an interesting research method that would be applicable to replicate in Community Health Club areas. Simple surveys are used to assess levels of Social Capital (Kawachi and Berman, 2000) to measure level of trust within communities. Informal reports from the police in Tsholotsho at the time of intervention indicated that the crime rate in areas where there are Community Health Clubs seemed to be reduced and this would provide an interesting new aspect to the model. Surveys to measure levels of interpersonal trust, an indicator of Social Capital could be done in the Health Club and compared with non-Health Club areas, and the results compared.

If it can be shown that Community Health Clubs reduce levels of distrust and aggression and builds community cohesion, this would be a useful model for use in high density areas of urban migration, where development efforts are stalled due to lack of Social Capital.

11.6.7. Effect of Community Health Clubs on reduction of disease

In addition there is an interest to monitor disease reduction in longitudinal studies to see if there is any significant difference between Health Club areas and non CHC areas. A preliminary study (Waterkeyn, 2005) has been done analysing records of ten health centres which shows some interesting declining trends particularly of diarrhoea, skin disease and bilharzia (See Annex 14). As this was not the main thrust of this study it could not be adequately researched within the time available. The declining disease trends in some Health Centres could be explained in other ways, such as shortage of drugs, increases cost of treatment, staff, national shortage of fuel with a resultant fall-off of reported cases. However this does not explain why in many wards disease start to slowly *increase* after a dip for a few years between 1999 - 2002. In all wards there is a decline, but in only one ward (Ruombwe) does the decrease *continue*. Statistics need to be gathered for the past two years.

It is surmised that much of the explanation between the fluctuating number of cases, and the decreasing trends and upward turns in wards could be tracked to the movement and intensity of training within Health Clubs. It is also apparent to the author that in wards where the more effective trainers are active there is sometimes a more significant decrease. However this observation needs to be supported with careful research into the exact start and finish of health sessions in each ward, density of membership, availability of facilitating EHT, and leadership within the ward and correlated more carefully against the Health Club activities in each ward.

The next stage should be to examine each ward in turn to isolate confounding variables, in order to understand the influence of Community Health Clubs upon the reduction of certain diseases in some wards. The CHC wards also need to be compared with a non-CHC control area, to establish if this trend is also apparent in non-intervention areas.

11.6.8. Prevention of Malaria

When interviewed, thirteen out of twenty Health Club members, claimed that malaria has been reduced in their family due to their preventative practices: burning cow dung at night, covering up well against mosquitoes, and clearing the surrounding bush near the house (See Annex 13.4.2). Local wisdom does place much credibility on such means of prevention, and members maintain their methods are effective. If this is true it goes against much well documented academic research that maintains that the only completely effective method of malaria prevention is the use of insecticide treated

nets. It is not known how many members are using mosquito nets, and it would be of interest to track some of the claims made by Community Health Club members, to see if some of their methods (e.g. burning cow dung) is indeed proving effective, as this is also used in other parts of East Africa, amongst the nomadic Orma people of North East Kenya.

11.6.9. Herbal remedies for opportunistic infections for HIV/AIDS

If success is gauged by community uptake, the popularity of herbal cures for many of the opportunistic infections that diminish the quality of life of those infected with HIV/AIDS need to be properly tracked and analysed medically. Home-based carers report continual success at alleviating painful symptoms such as herpes, urine infections, sores, throat infections, and even reduction in high blood pressure (See Annex 4). It has been impossible within the scope of this research to find out if there is any substance to these claims. However the groundswell of home based remedies has resulted in propagation of western and local herbs, and most of the registered PLWAs have their own herb garden and regularly treat themselves. Individuals who have been bed bound are now only housebound, and those that were housebound are in some cases back at work. There is an urgent need to track these cases as the herbal remedy is fast becoming of national interest and many NGOs and individuals are beginning to emulate this programme.

11.6.10. School Health Clubs: an entry point into the community

School Health Clubs have been tried in Zimbabwe (Mathew, 2004) and shown considerable success in raising awareness in child-to-child teaching programmes as well as child-to-parent interaction. Children learn faster than adults and are in a controlled environment and therefore well placed to be sources of information. In addition schools are often the pivot of the neighbourhood as most families will have one or more children at school. This makes it an obvious entry point into the community. Pilot programs using School Health Clubs in association with Parents Health Clubs would provide a full coverage of the area, and ensure equitable distribution of knowledge and practices, particularly in high-density slum areas, where migrant workers often lack a sense of community.

11.7. CONCLUSION

The model has demonstrated a means of scaling up according to demand, and the extent is dependent largely on the number of trainers available. Seed projects, providing first hand empirical evidence of the success of the Community Health

and Zimbabwe in Central and Southern Africa. More advocacy is needed to highlight the achievements of these three interventions to enable governments to adapt this model to local requirements and institutionalise this intervention at national scale. The CHC Model is a cost-effective community-based health promotion intervention which can achieve sustainable behaviour change and genuine community development, and it is expected that agencies seeking this solution will be more proactive in supporting further scaling up and replication once concrete and rigorous data is available.

With only ten years left before 2015, time is running out to achieve the MDG target to halve the number without sanitation and safe drinking water. The question remains whether development workers and academics will actively apply some of the theoretical concepts that have been brewing for years. The scaling up of Community Health Clubs, at least in Africa where its cost-effectiveness has now been proved, would offer a viable solution to creating a demand for sanitation and improved hygiene within the home.

Fig 25: Moving up off the mat:

Empowerment of CHC women is indicated from the changes in kitchen practice from traditional woman's place serving her husband from the fireplace (left) to eating alongside him (below) on a throne and tables moulded in clay.

Tsholotsho, 2001.

GLOSSARY OF TERMS

Acculturation: Major cultural change that people are forced to make as a consequence of intensive, first-hand contact between societies, (Haviland, 1993).

Adaptation: A process by which organisms achieve beneficial adjustment to a new environment (Haviland, 1993).

Bride price: Compensation paid by the groom or his family to the bride's family upon marriage (Haviland, 1993). A traditional custom in Shona and Ndebele societies known as *Ruoora* or *Lobolo*.

Community : a number of people who share a distinct location, belief, interest, activity or other characteristic that clearly identified their commonality and differentiates them from those not sharing it, (Hoffman, 1994).

Community Based Organisation: (CBO) A common interest association operating at village level, founded and run by community members themselves for their own objectives.

Common-interest associations: Associations not based on age, kinship, marriage or territory that result purely from an act of joining (Haviland, 1993)

Community Health Clubs: voluntary, common-interest associations at community level, formed to provide a forum for health information and good hygiene practice with the aim to improve family health.

Cultural change: the alteration of norms and values between two opposing worldview's thorough innovation, diffusion , cultural loss and acculturation, (Haviland, 1993).

Cultural diffusion: The borrowing by one society of a cultural element of another (Haviland, 1993).

Cultural loss: the abandonment of some trait or practise without a society with any replacement (Haviland, 1993).

Culture: A set of shared ideals, values and standards of behaviour which is the common denominator that makes the actions of an individual intelligible to the group (Haviland, 1993).

Culture of health: voluntary adherence to the norms and values, beliefs and actions that are focused on achieving the ideal of good health.

Cyclical worldview: norms, values, beliefs and attitudes that are tied to seasonal lifestyle, with an annual repetition of events and little expectation of variation from year to year.

Discipline: an ordered area or field of study; bounded groups or federations of theories, perspectives and methods associated with an area of study (Bunton and Macdonald, 2004).

Discourse: talk that works through particular institutional arrangements of power and knowledge that circulates and organises conversations between specific producers and audiences that relies on specific conventions for establishing its authority, e.g. Colonial discourse (Burke, 1997).

Empowerment: enabling individuals or communities to enhance their ability to control their immediate environment or to make personal choices, which make effective use of available resources.

Enculturation: The process by which s society's culture is transmitted from one generation to the next (Haviland, 1993).

Extended family: A collection of nuclear families, related by ties f blood, that often live together in one household (Haviland, 1993).

Functionalism: Theoretical interpretation in social science that searches for the interconnection between social institutions rather than seeking causal explanations (Keesing, 1975).

Gender: The elaborations and meanings assigned by cultures to the biological differentiation of the sexes (Haviland, 1993).

Group consensus: the general agreement within a group as to basic understanding of an issue, the acceptance of certain information as true and the ability to work together to achieve agreed objectives.

Gross National Product (GNP): the amount of wealth produced in a country per year, usually measured as per head of population (Giddens, 1995).

Health education: refers only to the *actual transfer of factual information* on health and hygiene, which forms part of the training content within the health sessions.

Hypothesis: a tentative explanation of the relation between certain phenomena (Haviland, 1993).

Influence: the power which stakeholders have over a project to control what decisions are made, facilitate its implementation or exert influence that can negatively affect the project (Reed & Skinner, 1998).

Importance: indicates the priority given by the project to satisfying those stakeholders' needs and interests through the project. In general terms, they can be determined by examining the goal, purpose and outputs of the project (Reed & Skinner, 1998).

Informal sanctions: Externalised social control designed to encourage conformity to social norms of the group, involving spontaneous expressions of approval or disapproval by members of the group (Haviland, 1993).

Integration: The tendency for all aspects of a culture to function as an interrelated whole (Haviland, 1993).

Integrative mechanism: Cultural mechanism such as a common-interest association that oppose forces for differentiation in a society (Haviland, 1993).

Key message: a one sentence slogan containing core information on a topic provided to assist rapid assimilation of an important health fact.

Levelling Mechanisms: A societal obligation compelling a family to distribute goods so that no one accumulates more wealth than anyone else (Haviland, 1993).

Levirate: A marriage custom according to which a widow marries a brother of her dead husband (Haviland, 1993).

Linear worldview: norms, values, beliefs and attitudes with an open-ended expectation of events, tied to an ideology of change.

Model: a temporary conceptual construction used to assist our thinking prior to the formation of a proven theory (Bunton and Macdonald, 2004).

Modernisation: The process of cultural and socio-economic change whereby developing societies acquire some of the characteristics of Western industrialised societies (Haviland, 1993).

Norms: expectations by a group of people about appropriate behaviour, which serve as common guidelines for social action (Abercrombie et al., 2000).

Paradigm: A context in which theories exist. It constitutes the agreed way seeing, describing and acting upon the world, or a particular field of study, and predicts the course of future investigation (Bunton and Macdonald, 2004).

Paradigm shift: A revolution in thinking when one paradigm is replaced by another, when several theories compete for dominance (Bunton and Macdonald, 2004).

Perspective: The epistemological basis or core assumptions about how a certain theory is generated (Bunton and Macdonald,2004).

Reciprocity: The exchange of goods and services of approximately equal value between two parties (Haviland, 1993).

Self-efficacy: Perceived personal ability to affect change (Bandura, 1977).

Society: A group of people who occupy a specific locality and who share common cultural traditions (Haviland, 1993).

Social Structure: The relationships of groups within a society that hold it together (Haviland, 1993).

Structural Differentiation: fragmentation of holistic, traditional society where individuals perform multiple tasks into a society where individuals perform specialised functions and roles.

Subcultural variation: a distinctive set of standards and behaviour patterns by which a group within a larger society operates (Haviland, 1993).

Syncretism: In acculturation, the blending of indigenous and foreign traits to form a new system, (Haviland, 1993).

Tradition: cultural practices within a modernising society, which may oppose new forces of differentiation and integration (Haviland, 1993).

Traditional Culture: the norms of an indigenous culture, prior to absorbing of alien values

Theory: Systematically organised knowledge applicable in a relatively wide variety of circumstances devised to analyse, predict, or otherwise explain the nature or behaviour of a specified set of phenomena that could be used as the basis for action (Van Ryn & Heany, 1992).

Values: a fundamental outlook recognised by the group of people in question, which provide a general standard by which the group or society maintains a certain identity which informs their most likely action.

World View: The conceptions, explicit and implicit, of a society or an individual of the limits and workings of its world.

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Appendices for

Cost Effective Health Promotion and Hygiene Behaviour Change through Community Health Clubs

Juliet A.V. Waterkeyn

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List of Annexes

ANNEX 1. 1. Randomly Selected Community Health Clubs in Makoni District : 2000-2001

	District	Ward	Ward code	Village code	Club Name	Club code	Respondent No.	Ennum-erator	EHT	Date collected
1	Makoni	Ruombwe	130	1	Svinurai	17	1-15	Gwata	Mwaramba	04.09.2000
2	Makoni	Dumbamwe	120	2	Tashinga	23	16-30	Chipunza	Chiwetu	31.08.2000
3	Makoni	Mutanda	111	3	Tasara	08	31-45	Chipunza	Haiza	16.09.2000
4	Makoni	Ngowe	124	4	Kwayedza	112	46-60	Chipunza	Faranisi	23.09.2000
5	Makoni	Tikwiri	116	5	Kushinga	44	61-75	Chipunza	Chirwandir	25.09.2000
6	Makoni	Ngowe	124	6	Pepukai	13	76-90	Gwata	Simango	30.09.2000
7	Makoni	Sangano	119	7	Chenjai	24	91-105	Gwata	Chiwetu	28.10.2000
8	Makoni	Tanda	113	8	Kaedza	18	106-120	Gwata	Gwengwe	13.10.2000
9	Makoni	Tanda	113	9	Kushinga	19	118-132	Chipunza	Gwengwe	07.10.2000
10	Makoni	Ruwombe	none	34	Haz.Hope	158	487-501	Gwata	Mwaramba	21.01.2001
11	Makoni	Chiduku	none	35	Kunda.irwe	143	502-516	Gwata	Guwaza	17.01.2001
12	Makoni	Tanda	103	36	Tatenda	67	517-531	Gwata	Gwengwe	14.10.2000
13	Makoni	Dewedzo	None	37	Kurarama	112	532-546	Gwata	Nyazenga	16.10.2000
14	Makoni	Mayo-Chiko	112	38	Taona/Ngwena	50	547-559	Chipunza	Zinahwa	18.11.2000
15	Makoni	Weya	115	39	TfananaB	119	560-574	Chipunza	Dzimano	11.11.2000
16	Makoni	Ruombwe	None	40	Kudz-Kwa	56	575-589	Gwata	Maramba	17.11.2000
17	Makoni	Weya	115	41	Tabudirira A	134	590-603	Chipunza	Dzimano	17.11.2000
18	Makoni	Nyamidzi	114	42	Chinawara	100	604-618	Chipunza	Haiza	27.11.2000
19	Makoni	Chiduku	125	43	M.batsvinB	75	619-633	Chinkonhi	Mahwe	27.11.2000
20	Makoni	Denzva	127	44	Pepukai	51	634-648	Chinkonhi	Chipise	21.11.2000
21	Makoni	Batanai	119	45	Chisungo	60	649-663	Chipunza	Pamhare	13.11.2000
22	Makoni	Ruombwe	126	46	Kwaedza	112	664-678	Chipunza	Mwaramba	08.12.2000
23	Makoni	Ruombwe	126	47	Kushinga	03	679-693	Chipunza	Mwaramba	24.11.2000
24	Makoni	Mayo 1	135	48	Svinurai	90	694-707	Chipunza	Mpangasa	28.10.2000
25	Makoni	Gwidza	101	49	Tamuka	30	708-722	Chikhoni	Mutede	17.11.2000

ANNEX 1.2. Randomly Selected Community Health Clubs in Tsholotsho District : 2000-2001

	District	Ward No.	Villag	EHT	Club Name	Club code	Resp. No.	Ennum-erator	Date data collected
1	Tsholo	Ward 6	10	P.Moyo	Mpumelelo	37	13-146	M.Moyo	18.09.2000
2	Tsholo	Ward 6	11	P.Moyo	SizananiA	49	147-161	M.Moyo	18.09.2000
3	Tsholo	Ward 6	12	P.Moyo	Siyabambili	38	162-176	M.Moyo	18.09.2000
4	Tsholo	Ward 5	13	S.Mpofu	Mas.pambi2	50	177-190	I.Mpofu	20.08.2000
5	Tsholo	Ward 5	14	S.Mpofu	Mas.pambili	31	191-205	I.Mpofu	28.08.2000
6	Tsholot	Ward 5	15	S.Mpofu	Mpindo B	32	206-220	I.Moyo	28.08.2000
7	Tsholo	Ward 6	16	P.Moyo	Sizanani B	35	221-235	M.Moyo	11.09.2000
8	Tsholo	Ward 5	17	S. Mpofu	Vkuzenzele	26	236-250	Ndlovu	16.10.2000
9	Tsholo	Ward 10	18	G.Ali	Bambanani	45	251-265	I.Mpofu	23.10.2000
10	Tsholo	Ward 6	19	P.Moyo	Thumamina	39	266-280	M.Moyo	23.10.2000
11	Tsholo	Ward 5	20	S.Mpofu	Mpindo 5	33	281-295	Ndlovu	25.09.2000
12	Tsholo	Ward 5	21	S.Mpofu	Sihlangeni	29	296-310	1.Mpofu	09.10.2000
13	Tsholo	Ward 6	22	P.Moyo	Vulinqondo	38	311-325	M.Moyo	25.10.2000
14	Tsholo	Ward 5	23	S.Mpofu	Sizangobhu	27	326-338	M.Moyo	09.10.2000
15	Tsholo	Ward 5	24	S.Mpofu	Sihlangene	28	339-353	Ndlovu	09.10.2000
16	Tsholo	Ward 5	25	S.Mpofu	Bambanai	29	354-368	I.Mpofu	25.09.2000
17	Tsholo	Ward 6	26	P.Moyo	Asithukheni	33	369-383	M.Moyo	25.09.2000
18	Tsholo	Ward 6	27	P.Moyo	Mpucuku A	36	384-397	M.Moyo	25.09.2000
19	Tsholo	Ward 10	28	G.Ali	HlanganonB	41	398-412	M.Moyo	13.11.2000
20	Tsholo	Ward 10	29	G.Ali	Thandanani	48	413-427	M.Moyo	20.11.2000
21	Tsholo	Ward 6	30	M.Moyo	Thuthkani	39	428-442	I.Mpofu	13.11.2000
22	Tsholo	Ward 10	31	G.Ali	Siyazma	44	443-456	I.Mpofu	20.11.2000
23	Tsholo	Ward 10	32	G.Ali	Mgodmasili A	40	457-471	M.Moyo	14.11.2000
24	Tsholo	Ward 10	33	G.Ali	Vusanani	42	472-486	I.Mpofu	20.11.2000

ANNEX.2.1. Income Generating Groups operating in Community Health Clubs in Makoni District by Dec 2000

(Annual Report: Zimbabwe A.H.E.A.D Organisation, 2001)

Income Generating Project	Raw Material Source	Type of Market	IT/ material donated	Number Projects 99/2000	Number Members trained	Amount Earned US$*	Amount US$ Earned per person*
Bee-keeping	Bees, Trees	Commercial	511 hives, smokers, veils	54	948	1,960	2.0
Fencemaking	Wire	Local	13 Fencing machine	34	240	290	5.80
Bee hives / coffins	Wood	Local:	Hand tools	28	163	1,520	9.30
Woodlots	Seedlings	local	Seeds/packets	85	488	Not for sale	N/a
Pottery hives	Clay	Local:	nil	28	163	184,08	1.12
Organic gardening	Seeds / Rabbits	Local:	Seeds / fencing	55	796	470	0.60
Oil Pressing & Lotion	Oil	Local	Oil presses	88	831	1,130	1.35
Sewing nets/Uniforms	Mos. net Fabric	Local	Mosquito netting fabric	42	363	11,667	1,607
Soap making	Oil	Local	25 Soap cutters. 73 soap trays	49	691	973	1.40
Agri -Imputs	Fertiliser / Cement	Local	nil	3	31	508	16.38
Peanut Butter	Groundnuts	local	Peanut butter press	36	182	1,064	5.84
Paper making	Wild plant fibre	Commercial	Pulping machine & Press	4	84	6,540	77.85
12 types TOTAL	**12 WITH LOCAL MATERIALS**	**12 x local 2 x buyers**	**8 x types technology**	**518 groups**	**5,052 trained**	Us$ 44,530	US$8.81 (1.20 - 77.85)

*** RoE US$1: Z$50**

Annex 2.2. Income Generating in Community Health Clubs in Makoni District, 2004.

(Project Report, ZimAHEAD, January 2005)

					INDIVIDUALS						Bank Accounts
	#	Members	#	Members	Income	Expenditure	Profit	Income	Expenditure	Profit	#.
					US $	US $		US $	US $		
Ruombwe	8	162	12	110	9,058.82	705.88	8,352.94	858.82	588.24	270.59	10
Sangano	5	294	13	235	66.47	53.53	12.94	20.59	8.82	11.76	13
Weya	10	863	38	392	14.71	6.76	7.94	42.06	15.88	26.18	25
Nyamidzi	12	612	11	166	53.71	45.59	8.12	0.00	0.00	0.00	10
Mutanda 1	13	101	10	101	46.71	20.00	26.71	0.00	0.00	0.00	9
Mutungagore	7	190	12	190	70.59	58.82	11.76	0.00	0.00	0.00	13
Dumbamwe	8	581	32	339	542.82	25.53	517.29	124.41	45.88	78.53	9
Tikwiri	5	320	14	133	1,258.12	508.24	749.88	0.00	0.00	0.00	10
Ngowe	12	842	28	261	288.24	97.65	190.59	494.12	234.12	260.00	15
Inyati Mine	15	223	30	223	94.12	58.82	35.29	8.82	5.88	2.94	5
Tanda	15	571	24	231	72.12	40.35	31.76	24.71	1.18	23.53	7
Dewedzo	14	470	23	92	609.41	159.41	450.00	3,647.06	437.06	3,210.00	10
Matotwe	3	195	6	180	30.59	21.76	8.82	49.41	34.12	15.29	0
Chiduku	6	432	25	125	14.12	12.94	1.18	65.88	22.94	42.94	0
Mayo 1	4	590	59	490	14.71	2.94	11.76	17.06	2.94	14.12	59
Mayo 2	5	49	4	49	58.82	52.94	5.88	35.29	17.65	17.65	1
Nyamangura	7	149	14	126	113.53	10.92	102.61	74.41	62.35	12.06	0
TOTAL	149	6644	355	3443	12,407.59	1,882.09	10,525.49	4,604.68	1,477.06	3,127.62	196

RoE = US$1: Zim $ 17,000 (NB Zimbabwe Inflation from 2000- 2005 was up to 400% , hence fall of Zim $ from 50 to 17,000: US$1 in four years

ANNEX 3.1. Herbal Remedies Used In Community Health Clubs

20 Valuable Herbs Their Medicinal Properties And Cultivation Tips
- Collated for ZimAHEAD Health Club Members.
By Josephine Mutandiro (Programme Co-ordinator Zimbabwe A.H.E.A.D. Organisation. 2005

1. AMARANTH:

Usable parts: Leaves
Properties:
- Source of Vitamin A, fibre, calcium, protein and iron.
- Throat gargle.
- Employed as compress to alleviate skin ulcerations.
- Combats diarrhoea dysentery, internal haemorrhages and excessive menstruation.

Method: Pour a cup of boiling water over a teaspoon of crushed leaves. This same infusion can be used as a cold compress for skin ulcers as well as a safe gargle.
Drink 1-2 cups of cold infusion daily.
Cultivation: Keep seeds moist during germination and early growth, once established amaranth is drought resistant.

2. CORIANDER:

Useable parts: Leaves, seeds and roots.
Properties:
- Useful for headache, migraine and fever.
- A mild laxative.
- Treats women's ailments, useful in labour and helps regulate menstruation.
- Relieves muscle spasms and cramp.
- Soothing mouthwash after tooth extraction.
- Useful in relief of arthritic pain.

Method: Eat whole leaves in salads or sandwiches. As a mouthwash make a mild tea and gargle.
Cultivation: Coriander requires light but fertile, well-drained soil in full sun. Sow in early spring.

3. BORAGE:

Usable parts: Flowers and leaves.
Properties:
- Contains potassium, which helps the body make cortisone by stimulating the adrenal cortex.
- Rich in mineral salts.
- Reduces fever, sore throat and chest infections.
- Relieves bites, stings, swelling and bruises.
- Softens skin.
- Helps relieve stress and depression.

Method: Pour a cup of boiling water over a quarter of a cup of fresh leaves, stand for 5 minutes and strain, sweeten with honey if desired.
For the skin apply crushed leaves directly to skin.
Cultivation: Sow in late winter for spring crop. Borage will grow easily in moist, well-drained soil in full sun. Borage will seed prolifically and if left will self sow.

4. CALENDULA:

Useable parts: Flowers and leaves.
Properties:
- Cleanses and softens skin.
- Flowers have antiseptic properties.
- Use in ointment for leg ulcers, varicose veins and bruises
- Sooths inflammation and chilblains.
- Relieves sore nipples caused by breast-feeding.
- Heals mouth and gum infections.
- Oil can be extracted from petals to make skin preparations and aromatherapy.

Method: Pour a cup of boiling water over 1 teaspoon of fresh petals, stand for 5 minutes and strain. This drink can be used as a lotion and a recipe to relieve indigestion.
Cultivation: Enjoys full sun, well-drained soil, seeds are easily harvested after flowering or if left will self sow.

5. CATMINT:

Usable parts: Flowers and leaves.
Properties:
- Rich in vitamin C.
- Relieves colds, fevers and pain.
- Can be used to combat restlessness, colic and even bedwetting in children.
- Combats varicose veins.

Method: For fever and pain—pour 2 cups of boiling water over one cup of leaves and flowers—stand for 5 minutes and strain. For children use 1 teaspoon of fresh leaves and flowers in 1 cup of water. For varicose veins apply crushed leaves and flowers to skin for 30 mins.
Note: Catmint should not be used by pregnant mothers.
Cultivation: Will grow freely in most conditions; keep moist but well drained in full sun or semi shade. To encourage root stock pin stems to the ground, when roots have formed cut from mother plant and replant as cuttings.

6. COMFREY:

Usable parts: Leaves and dried roots.
Properties:
- Relieves bruises, swelling and sprains.
- Relieves bronchitis, coughs, throat and mouth ailments.
- Relief of gout.
- Assists in the arrest of haemorrhaging.

Method: for external treatment chop 3-4 leaves finely, soften with hot water, apply to affected area cover with clean bandage.
Internal use—1 teaspoon of chopped leaves, add to 1 cup boiling water—stand for 5 minutes and strain.
In the case of gout 3 cups can be taken daily for 3 days for all other internal use limit to 1 cup daily—*for ailments other than gout it is advisable to limit intake to 2 cups per week.*
Cultivation: Once established comfrey will last many years if care is taken to prepare the soil well with good compost or poultry manure before planting. Plant deeply to protect stem. Prefers full sun. take care not to disturb the roots when weeding.

7. BASIL:

Useable parts: Leaves and flowers
Properties:
- Draws poison from insect stings.

8. DANDELION:

Useable parts: Leaves and roots.
Properties:
- Immune booster and blood cleanser.

- Tonic and antiseptic for relief of nausea and digestive complaints.
- Cure for headaches.
- Mouth gargle.
- Relief of foot aches and pains.
- Stimulates hair growth.
- Promotes sleep.
- Acts as a room freshener, which deters flies and mosquitoes.

Method: Apply crushed leaves to insect bites and stings.
Rub fresh leaves onto temples to relieve headaches.
Steep leaves into boiling water, allow to cool, use as a gargle.
Rub leaves around heels to sooth aches and pains caused by standing for a long time.
Crush or pound leaves and rub into scalp to stimulate hair growth.
Keep on windowsill to deter insects.
Cultivation: Grow Basil in a sheltered, warm, sunny position in moist but well drained soil. Pinch out center to encourage bushy growth

- Helps urination problems, cleanses liver, kidney and gall bladder.
- Good for digestive system and loss of appetite.
- Assists with relief of diabetes, eczema, dropsy, rheumatics, arthritis.
- Removes warts and blisters.
- Relieves red/sore eyes.

Method: boil young leaves or chop and grind dried roots to make "coffee" or use young leaves to make mild tea. The juice from stems can be applied directly to warts and blisters. Wipe diluted juice around *(not in)* the eyes.
Cultivation: Grow in a sunny well-drained position, if leaves are intended for eating water well in early growth period and eat before flowering to avoid bitter flavour. Sow in spring from seed or by planting pieces of taproot.

9. ECHINACEA

Useable parts: Roots
Properties:

- Boosts the immune system
- Anti viral, anti fungal.
- Relieves respiratory infections
- Relieves eczema, psoriasis (skin rash) and haemorrhoids
- Takes the sting out of sunburn.

Method: Place1-2 teaspoons root and a cup of water in a pot, bring to the boil and simmer for 10-12 minutes. Drink 3 times daily; this brew can also be applied directly to skin.
Cultivation: Sow seeds on the surface of the garden in spring, when germination starts cover lightly with 1/8 inch of soil. Plants will grow stronger if thinned to about 18 inches apart. Echinacea prefers well-drained soil in full sun or part shade

10. LAVENDER:

Useable parts: Leaves and flowers.
Properties:

- Calms, relaxes and aids sleep.
- Relieves headaches.
- Antiseptic good for the completion and arresting acne
- Room freshener and deters mice.
- Sooths tired aching feet.
- Mouthwash.

Method: Pour one cup of boiling water over a tablespoon of leaves, stand for 5 minutes, strain and sweeten with honey if desired. Place dried leaves and flowers in cupboards to freshen linen and deter mice and insect pests. As a sleep aid place dried leaves and flowers under pillow. As a mouthwash and to sooth aching feet make a mild tea and apply directly to skin.
Cultivation: Lavender can be grown from cuttings taken in autumn to strike in winter for planting in spring, keep new cuttings well watered. Plant in sunny position and water until established, lavender will tolerate dry conditions well.

11. GOTA KOLA:

Useable parts: Leaves
Properties:

- Enhances memory.
- Relieves symptoms of arthritis and stomach ache.
- Boosts immune system.

Method: Leaves can be eaten raw or pour a cup of boiling water over a handful of fresh or dried leaves, stand for 5 minutes and strain – drink twice daily for 4 days.
Cultivation: Cultivate by division in late winter early spring, gota kola is easy to cultivate in most soil types and tolerates most garden conditions.

12. FEVERFEW:

Useable parts: Leaves and flowers.

- To halt the onset of migraine and headache.
- Helps clear uterine infections.

Method: Steep a small leaf in a cup of boiling water and allow to stand for 5 minutes, strain and sip a small quantity, with lemon juice if available.
Note: do not take over a long period of time.
Cultivation: Seeds take about 2 weeks to germinate or plants can be grown from cuttings. For best results thin plants to about 12 inches apart.

13. LEMON BALM:

Useable parts: Whole plant.
Properties:

- Contains citronella – an excellent mosquito repellent.
- Settles anxiety, insomnia, depression and stress.
- Cerebral tonic.
- Relieves coughs, colds, fever vomiting and indigestion.
- Combats goitre.
- Relieves insect bites and minor sores.

14. NETTLE:

Useable parts: Leaves.
Properties:

- Purifies blood and cleanses internal organs.
- Halts diarrhoea.
- Heals intestinal ulcers.
- Relieves asthma, gout, arthritis and rheumatic pain.
- Helps prevent internal haemorrhaging and nose bleeding.
- Assists with the cure of skin ailments, eczema and dandruff.
- Increases milk flow in nursing mothers.

Method: Make a mild tea and drink morning and evening; apply the tea

Method: Pour a cup of boiling water over 1-2 sprigs of leaves, stand for 5 minutes then strain. This tea can be drunk with honey added or applied directly to skin surface. For insect bites rub leaves directly on skin.
Cultivation: Lemon balm is best cultivated from cuttings, once established it grows vigorously in full sun or semi shade, must be kept moist in hot dry weather, dies back in winter but will regrow in spring.

externally where required.
Cultivation: Wear protective gloves when handling nettle, propagate by root division.
Once processed nettle will no longer sting.

15. OREGANO:

Useable parts: Leaves and flowers.
Properties:

- Treats coughs, nervous headache, irritability, stomach and gall bladder complaints.
- Effective treatment of motion sickness.
- Relieves menstrual cramps and rheumatism.
- Relieves toothache.
- Hair conditioner.

Method: Pour a cup of boiling water over quarter of a cup of leaves; stand for 5 minutes and strain. Chew leaves to relieve toothache. Apply externally as a poultice for swelling and rheumatic pain.
Cultivation: Plant oregano in fertile, well-drained soil, in full sun. Sow seeds in spring or divide roots in autumn or spring.

16. PARSLEY:

Useable parts: Leaves.
Properties:

- Breathe freshener.
- Cleanses kidneys.
- Treats kidney and bladder infections and flatulence.
- Appetite stimulant.
- Relief of women's complaints such as cystitis and excessive or painful menstruation.
- Taken as a preventative measure for cancer.
- Relieves insect bites and stings.

Method: chew parsley leaves to freshen breath. As a medicinal tea - pour a cup of boiling water over a quarter a cup of fresh leaves, leave to stand for 5 minutes and strain, limit intake to one cup per day for a maximum of 5 days. Apply leaves directly to skin for bites and stings.
Cultivation: Seed can take up to 6 weeks to germinate. Sow seed from spring to late summer, likes full sun or partial shade in hot climates. Soil must be moist and fertile but well drained.

17. PEPPERMINT:

Useable parts: Leaves.
Properties:

- Eases tiredness and general ache and pains.
- Relieves stings and dog bites.
- Relieves indigestion, colds and flu symptoms.
- Relieves flatulence, reflux and hiccups.
- Clears mouth, gum and skin disorders.
- Repels mosquitos and mice.

Method: Chew leaves to aid digestion. To relieve colds and flu symptoms pour a little boiling water over a bowl of mint leaves, cover head and bowl with towel and inhale the steam. For internal use pour one cup of boiling water over a quarter of a cup of fresh leaves, stand for 5 minutes and strain. Use fresh or dried leaves to repel mosquitos and mice.
Cultivation: Mint is an invasive plant, which can spread rapidly; it is easily cultivated by root division. Mint thrives in full sun or partial shade but requires regular watering.

18. SAGE:

Useable parts: Leaves.
Properties:

- Cleansing mouthwash and teeth whitener.
- Digestive aid.
- Antiseptic, anti fungal internal and external astringent.
- Nerve tonic and deodorant.
- Treats irregular menstruation.
- Relieves coughs and colds.
- Assists memory.

Method: Pour one cup of boiling water over a quarter cup of fresh leaves, stand for 5 minutes and strain. Use leaves bathed in boiling water for facial steam. Rub directly on teeth to whiten. Use tea under arms and as footbath.
Cultivation: Sow seeds in spring or plant from cuttings, sage requires full sun in well-drained, light soil with adequate water during dry spells.

19. WORMWOOD:

Useable parts: Leaves.
Properties:

- Antiseptic and pain relief.
- Treats fever, coughs, sore throat, flu and jaundice.
- Restores appetite and relieves diarrhoea and dysentery.
- Sooths toothache, earache and ear infections.
- Treats intestinal worms.
- Insect repellent.
- Treats acne and boils.

Method: Add one sprig of leaves to a cup of boiling water, stand for 5 minutes and drain – add honey if desired and take 10 mils morning and night for 4 days.
Note: do not exceed the stated dose.
Cultivation: Wormwood prefers an open, sunny situation with light well-drained soil. Prune lightly in spring to stimulate growth. Plant cuttings in summer or divide in spring.

20. YARROW:

Useable parts: Leaves and flowers.
Properties:

- Rich source of minerals and vitamins.
- Heals wounds, halts nosebleed.
- Treats skin complaints including eczema, rashes and scratches.
- Relieves haemorrhoids.
- Treats hypertension and coronary thrombosis.
- Brings down fever.
- Relieves earache and toothache.
- Can be used as facial steam cleanser.
- Treats excessive menstruation and dysentery.

Method: Rub leaves directly on wounds or place in bath to relieve skin conditions. Place leaves or flowers behind ear to relieve earache, chew leaves to relieve toothache.
Cultivation: Cultivate by root division, yarrow is a vigorous grower, which if left unchecked will spread rapidly.

Annex. 3.2: Extract From Home Based Care Reports

(Monthly Report of Home Based Carers, 2003, Zimbabwe A.H.E.A.D. Organisation)

Date	Ward	Village	Name*	Symptoms	Herbs given	Follow up
20/7/2003	Sangano	Chihamwe	Woman	Have been taken medical treatment for 2 years for pimples all over body and sores very itchy	Comfrey & sour fig ointment Atmesia and comfrey/mint to drink	Reported sores and everything healed
4/8/03	Sangano	Sababa	Man	Sores over ear & body. Medical treatment not healed	Garlic and Comfrey ointment	Reported healing
6.8.03	Sangano	Mataga	Woman	Very itchy body and have been to clinic	Garlic and Sour fig ointment	
7.8.03	Sangano	Baradzanwa	Woman	High BP fail to buy tablets	Comfrey & blackjack as relish	Hospital reported low BP
8.8.03	Sangano	Sababa	Man	Swollen gums, hospital not treated	Comfrey paste on tooth	Swollen gums recovered
11.8.03	Dumbamwe		Couple	Cough,itchy body, headache, dissiness, heart problems,	Garlic and honey, cough mix, mint, lemon balm, lavender.	Not yet reported
12.8.03	Sangano	Zonga	Woman	painful urination	Parsley & comfrey	Reported healing
15.8.03	Sangano	Chikwira	Boy (18yrs)	Malaria no tablets at clinic	Peach & water	Reported better
15.8.03	Sangano	Sababa	Man	Indigestion problem	Mint, fennel mix	Not yet reported
16.8.03	Sangano	Muonwe	Woman	Asthma and kidney stones	Thyme for kidney, Bubinella for Asthma, thyme mix stinging nettle	Said to be much better
18.8.03	Sangano	Chibomwe	Man	Mudinhi	Mushamba	Not yet reported
6.2003	Inyati Mine	V.31	Man	Coldness & fever, Malaria and headache	Tansy, Yarrow & Pawpaw leaves in hot water	He was well in two days time
6.2003	Inyati Mine	V.32C	Man	High temp, coldness, chills, sneezing (Malaria)	Rurimi rwemombe, tansy, papaw leaves	He was well within a week
6.2003	Inyati mine	V.31	Woman	Toothache	Papaw roots and maize cob ashes	Relieved after some days
6.2003	Inyati Mine	V.31.	Woman	T.B.	Garlic Cloves, yarrow	Could do better if she carry on taking it
2.6.03	Mutanda 1	V.9.	Man	Rash on face	Wash with yarrow	The rash is over.
3.6.03	Mutanda 1	V.12.	Man	Herpes	Comfrey leaves	The wounds are healing
5.6.03	Mutanda 1	V.9.	Woman	Ring worm and thrush	Garlic ointment and cloves	The rings are going away and her mouth is getting clear
9.6.03	Mutanda 1	V.10.	Woman	Chest pains and cough	Thyme & rosemary	Slight pains and the cough is cleared
12.6.03	Mutanda 1	V.9	Man	Fever	Mixed herbs for 3 days	The fever is over
12.6.03	Mutanda 1	V.7.	woman	Ring worm & flu	Chimukonde, parsley	The rings have cleared off

*clients' names omitted

ANNEX 4. HIV/AIDS statistics for Makoni District:

(Zimbabwe A.H.EA.D Project Records, Feb.2003)

1. Number of HIV/AIDS clients registered with Care-givers in ten wards of Makoni District (Feb 2003)

10 Project Wards	# h/holds	Population	# Bedbound	# House bound	# Mobile + others	Total	% pop. HIV/AIDS infected
Ruombwe	2,224	13,344	43	46	300	389	2.9
Sangano	2,000*	12,000*	15	53	376	449	3.7
Weya	1,700	10,200	49	-	404	453	4.4
Ngowe	2,000*	12,000*	124	150	238	512	4.2
Nyamidzi	2,426	14,556	14	100	250	364	2.5
Mutanda 1	2,000*	12,000*	30	36	112	178	1.4
Mutungagore	2,000*	12,000*	13	35	75	123	1.0
Dumbamwe	2,494	14,964	44	56	156	256	1.7
Tikwiri	1,753	10,518	30	61	162	253	2.4
Inyati Mine	2,900	17,400	14	18	48	80	2.7
Totals	**21,497**	**129,100**	**376**	**555**	**2,121**	**3,052**	**2.3%**

** exact number of household calculated by average per ward ; population calculated as 6 per h/hold*

2. Ratio of Caregivers to registered clients infected/affected with HIV/AIDS in ten wards of Makoni District (Feb 2003)

Phase1 Wards	Population	Population Affected and Infected	# Village Caregivers	# CHC Home based care trainers	Total carers	Ratio Carer: client
Ruombwe	13,344	986	12	10	22	49
Sangano	12,000*	774	5	5	10	75
Weya	10,200	1,855	86	15	101	18
Ngowe	12,000*	1,129	13	12	25	45
Nyamidzi	14,556	1,455	70	36	106	13
Mutanda 1	12,000*	1,236	44	14	58	21
Mutungagore	12,000*	876	35	19	54	16
Dumbamwe	14,964	731	9	9	18	41
Tikwiri	10,518	696	26	7	33	21
Inyati Mine	17,400	883	68	8	76	12
Total	**129,100**	**10,621**	**368**	**120**	**503**	**21**

** exact number of household calculated by average per ward ; population calculated as 6 per h/hold*

ANNEX 5: Community Based Maintenance and Management Course

Members Card *(Zimbabwe A.H.E.A.D Organisation, 2003)*

1	Introduction
2	Mapping & planning
3	Inventory & Research
4	Siting of water & sanitation
5	Water related diseases
6	Sinking of water point
7	Lining and cover slab
8	Installation
9	Fencing
10	Headworks
11	Washing slab
12	Apron & drain
13	Cattle Trough
14	Soak away
15	Maintenance - Long term
16	Daily Maintenance
17	Tools & Spare parts
18	Electing a committee
19	Roles & responsibilities
20	Record keeping
21	Constitution
22	Bank Account
23	Monitoring & Evaluation

	Wet Season	Dry Season
Grid Ref. of Waterpoint		
Name of Waterpoint		
Type of Waterpoint		
Time for water collection		
No. metres from home		
No. of users		
Depth of water		
Depth of borehole		
Yield quality		
Buckets used per day		
No of people using water		
Is borehole fenced?		
Nutrition Garden		
Community Wood lot		
Any other sources used?		

Water point committee:

Sanitation and Environment Course

1	Oral-Faecal Route
2	Sanitation Ladder
3	Human Waste as resource
4	Ecological Sanitation
5	Household / Village maps
6	Siting latrine pits
7	Digging latrine pits
8	Materials & Costing
9	Collecting sand
10	Revolving Fund
11	Moulding bricks
12	Lining pits
13	Slab making
14	Vent pipe making
15	Superstructure
16	Handwashing facility
17	Bathrooms
18	Soakaways
19	Latrine maintenance
20	Child sanitation
21	Using flush toilets
22	Monitoring the environment

Home visits		
Date	Score	Name

ANNEX 6: Achievements of Health Education and Hygiene Behaviour Change by EHT in Tsholotosho, Makoni and Gutu Districts of Zimbabwe (2000).

				SAMPLED CLUBS FOR EHT			RANKING OF EHT'S CLUBS			TOTAL CLUBS FOR EHT			
District	EHT	Gender EHT	Ward	# clubs	m/ship	mean size	HE* Rank	BC** Rank	Rank	# clubs	m/ship	size	started
Tsholotsho	Mpofu Mrs	female	Ward 5	7	417	60	1	1	1	11	662	60	1999
Makoni	Haiza	male	4 wards	4	321	80	2	2	2	19	1,482	78	1999
Makoni	Gwengwe	male	Tanda	3	155	51	3	3	3	14	677	48	1996
Makoni	Chipisi	male	Denzva	1			4	5	6	5	190	38	1998
Makoni	Dzimano	male	Weya	2	143	71	8	9	4	10	872	87	1998
Makoni	Chiwetu	male	Sangano	2	177	88	7	3	4	10	894	89	1998
Makoni	Faranizi	male	Ngowe	2	403	80	5	14	7	10	484	48	1999
Makoni	Nyazenga	male	Dewedzo	1			6	15	8	6	343	57	1999
Makoni	Guwaza	male	Chiduku	1			9	5	9	2	162	81	1999
Makoni	Mwaramba	male	Ruombwe	5	573	115	10	11	10	21	1,840	87	1996
Makoni	Chifamba	male	Mayo 1	2	124	62	11	8	11	4	285	71	1998
Gutu	Mahofa	male	Ward 29	4	143	36	12	7	12	17	629	37	1999
Gutu	Chinamatira	male	Ward 8	4	323	80	15	10	13	11	652	59	1999
Gutu	Mushandu	male	Ward 17	4	363	91	14	12	14	11	788	71	1999
Tsholotsho	Mpofu	male	Ward 6	9	567	63	13	13	15	12	646	53	1999
Tsholotsho	Ali	male	Ward 10	6	380	63	16	16	16	7	465	66	1999
Gutu	Gwandure	male	Ward 13	3	163	54	17	17	17	9	518	57	1999
Gutu	Mushipe	male	Ward 3	4	239	60	18	18	18	9	491	54	1999

***HE : Health Education (levels of health knowledge achieved by members)**

**** BC: Behaviour change (Levels of behaviour change of members observed by proxy indicators)**

ANNEX 7.1: Health Knowledge related to other variables in Community Health Clubs in Zimbabwe

HYGIENE PRACTICE	% MEMBERS WITH KNOWLEDGE OF DIARRHOEA			
	Good Knowledge	Partial Knowledge	No knowledge	P-value
Protected water	76	18	6	0.332
Covered water	78	16	6	0.006
Use of ladle	79	15	6	0.0001
Individ cups	75	18	7	0.608
Individ plates	76	18	6	0.649
Use pot rack	76	18	6	0.299
Use HWF	81	15	4	0.0001
Use soap/ash	86	10	4	0.0001
pouring method	77	17	6	0.0001
Use rubbish pit	76	18	5	0.01
Burn rubbish pit	77	18	5	0.032
Clean swept yard	76	17	7	0.203
No animal faeces	56	13	4	0.745
No childs faeces	74	19	7	0.038
No adult faeces	76	18	6	0.791
clean latrine	76	18	6	0.163
latrine in use	74	20	7	0.351

Annex 7.2: % Members with good knowledge of diarrhoea related to other variables

n = 1,079	% MEMBERS WITH GOOD KNOWLEDGE OF DIARRHOEA						
Age group	15-19yr	20-29yrs	30-39yrs	40-49yrs	50-59yrs	60s	70+
Good knowledge	83	85	79	77	72	66	63
Partial Knowledge							
No knowledge							
Total							

n = 1,079	% MEMBERS WITH GOOD KNOWLEDGE OF DIARRHOEA						
Years of Schooling	less 2 yrs	2-4 yrs primary	all primary	>2 yrs sec	ZJC pass	2-4 sec	pass '0'
Good knowledge	67	71	78	80	84	79	88
Partial Knowledge	22	21	18	15	12	16	8
No knowledge	11	8	4	5	5	5	4
Total	100	100	100	100	100	100	100

n = 1,079	% MEMBERS WITH GOOD KNOWLEDGE OF DIARRHOEA			
# HEALTH SESSIONS attended	0 to 5 sessions	6 to 10 sessions	11 to 19 sessions	20+ sessions
# members (%)	42 (4%)	165 (15%)	309 (28%)	593 (53%)
Good knowledge	74%	66%	74%	79%
part know	14%	19%	20%	16%
no know	12%	15%	6%	5%
Total	100	100	100	100

N=1,110	% MEMBERS WITH GOOD KNOWLEDGE OF DIARRHOEA			
RELIGION	Christian	Apostolic	Traditional	Other
# members (%)	628 (57%)	418 (38%)	41 (4%)	23 (2%)
Good knowledge	74%	78%	71%	78%
part know	19%	17%	29%	13%
no know	7%	5%	0%	10%
Total	100	100	100	100

n = 1,110	% MEMBERS WITH GOOD KNOWLEDGE OF DIARRHOEA			
TIME LAPSE SINCE END OF HE	not complete	less than 6mth	6mth-1yr	over 1yr
# members (%)	298 (27%)	153 (14%)	79 (7%)	580 (52%)
Good knowledge	73%	70%	71%	79%
part know	19%	23%	23%	16%
no know	8%	7%	6%	5%
Total	100	100	100	100

n = 1,110	% MEMBERS WITH GOOD KNOWLEDGE OF DIARRHOEA			
MARITAL STATUS	never married	married	divorced	widowed
# members (%)	14 (2%)	892 (80%)	32 (3%)	172 (15%)
Good knowledge	100%	76%	81%	71%
part know	0%	18%	16%	22%
no know	0%	6%	3%	7%
Total	100	100	100	100

ANNEX 8: District Level Focus Group Discussion

A Focus Group Discussion was held in 2002, with Ministry of Health EHTs and District Staff from Tsholotsho and Makoni District, to discuss preliminary findings from the survey. All were given the results to examine and after half an hour were asked to discuss on some of the following points:

Changes are greater between Project and Control when:

- Changes are exclusive to the project
- where there has been less history of development
- when the changes do not involve financial expenditure
- when the woman is able to effect changes without help from husband.
- When the wife is not too busy in the fields or fetching water long distance
- When there is some material gain in the project
- When there is an effective/dedicated/charismatic EHT

The Community Health Club Strategy will be most successful when:

- there is peace and stability in the country
- the clubs are not affiliated to political parties, particular religions or societies
- Clubs are open to men and women of all ages, religions, and education levels
- There is no joining fee
- There is an elected Executive Committee and constitution
- All activities are participatory and all decisions are bottom up.
- there has been little previous development in water health and sanitation
- there is no conflict of interest with other donors
- the area does not have other water and sanitation programmes
- training materials have been prepared in readiness for the training
- the field staff are well trained in participatory methods of training
- the field staff are well supported and monitored by their head office
- the field staff receive fair allowances or incentives for dedication
- the field staff are fully mobile, supplied with motor bikes/bicycles/boats
- the running of the motor bikes/boats is well monitored against performance
- there is adequate logistical backup in terms of petrol, spares and training materials
- the members are rewarded with a certificate for full attendance at a graduation ceremony
- membership cards are used to define the programme objectives signed by field worker
- monthly activity sheets are kept by field workers signed by club chairpersons
- health education is backed up by water and/or sanitation inputs for members
- the full four stage A.H.E.A.D Methodology is used leading to holistic development

The Cost-effectiveness of Community Health Clubs:

- The target group is a regular and consistent 'club' of people that are registered and their weekly attendance can be monitored (membership cards)
- The heath education has a set number of topics to cover which can be checked
- The programme has a time frame that can be evaluated (six months once a week)
- The programme has a content which can be quantified (20 topics)
- The amount of knowledge gained can be assessed (symptoms, transmission and cure)
- Each member is given practical objectives to achieve (membership cards)
- Behaviour change can be observed and quantified (home visits, spot observations)
- Club records provide community monitoring (register and membership cards)
- Project records provide costs of outputs and training (monthly claim forms)
- As outputs and inputs can be analysed the intervention can be costed per member

REPLICATION OF THE COMMUNITY HEALTH CLUB APPROACH

As well as the issues described above the following topics were also discussed

- Agency preparation for entry into community
- Agency's ability as perceived by the community
- Staff monitoring and back up by head office
- Incentives and transport for trainers
- Different, inadequate or inappropriate training material
- Commitment or interest by field staff
- Trainers ability to conduct participatory sessions
- Use of certificates or other incentives with community
- Follow through with water, sanitation or other development projects
- Previous experience of levels of community mobilisation
- Previous experience of sanitation demand
- Previous experience of hygiene behaviour changes
- Previous experience with levels of health knowledge
- Previous experience with trainers application and achievement levels

ANNEX 9. Summary of Quantitative Findings

Summary of 20 indicators of behaviour change in Community Health Clubs Makoni and Tsholotsho Districts of Zimbabwe, 2000.

#	Observed proxy Indicators of behaviour change	% Tsholotsho	P value	% Makoni	P value
1.	No open defecation[1]	94	>0.0001	88	>0.0001
2.	Pouring for handwashing[2]	88	>0.0001	41	>0.0001
3.	Individual plate[3]	76	>0.0001	33	>0.0001
4.	Individual cup[4]	75	>0.0001	32	>0.0001
5.	Ladle used[5]	65	>0.001	3	n.s.
6.	Cat sanitation	57	0.0001	14	0.001
7.	Ladle owned	49	>0.0001	10	0.05
8.	Nutrition garden	41	>0.0001	19	>0.0001
9.	HWF owned[6]	40	>0.0001	25	0.0006
10.	Rubbish pit owned	39	>0.0001	11	0.001
11.	Used clean latrine	39	>0.001	-	n.s.
12.	Pot rack owned	37	>0.0001	12	0.0001
13.	Hand Wash Facility in use[7]	35	>0.0001	15	0.004
14.	Rubbish well managed[8]	31	0.0001	26	0.001
15.	Yard sweeping	24	>0.0001	-	n.s.
16.	Use of soap[9]	19	0.001	6	0.0001
17.	Covered water[10]	6	0.05	-	n.s.
18.	No children faeces in yard[11]	4	0.08	7	0.09
19.	Fruit trees	-	n.s.	2	n.s.
20.	Protected water[12]	-	n.s.	-	n.s.
	# Significant indicators		18		14
	Mean of 20 indicators	45		21	

[1] Surrounding area in bush free from faecal deposits
[2] System of hand washing pouring water to waste rather than sharing a common bowl of water
[3] Each person eats from their own plate rather than from a shared plate
[4] Each family member has their own dedicated identifiable cup
[5] Ladle is not only owned and evident but when asked to take water is used
[6] Hand washing facility has been constructed and is evident
[7] The hand washing facility has water in it and evidence of use such as a plant growing below tap
[8] Separation of litter into biodegradable for composting and evidence of rubbish burnt
[9] Soap found near hand washing facility. This proved to be a poor indicator as soap was kept in house due to theft by rodents, birds or neighbours
[10] Covering drinking water was habitually done in control as well as CHC areas
[11] Whilst yard had often been swept there was subsequent random defecation by toddlers evident in most households
[12] Control and CHC areas had the same level of water provision and this was not dependent on intervention

ANNEX 10. Instructions on how to conduct the Pair-wise Ranking participatory exercise

Research on Appeal of Community Health Clubs
J.Waterkeyn. 2004

Hypotheses:

1. Community Health Clubs appeal to semi literate women because they provide a chance for self improvement which is not necessarily material

2. Higher needs on the Maslow hierarchy are only felt when lower ones are met.

3. Club members' aspirations move up the hierarchy with the duration of their membership

4. Most of the active members have met most of the Needs.

Methodology

1. At a club meeting divide members into groups of 10 and ask them to come up with ten main reasons why they wanted to join the club in the beginning and why they have stayed in the clubs.

2. Group these reasons under the seven main headings:

    1. Self Actualisation: The need to **Improve:** Good mother/ better wife
    2. Aesthetic: The need to be **Smart:** home improvement/ improved public self image
    3. Cognitive: The need for **Knowledge** : learn / understand
    4. Esteem : The need for **Respect** : from friends, family, husband
    5. Belonging: The need to for **Unity** : socialisation, getting together
    6. Safety: The need for **Security** ; Good Health / Club support, IGs
    7. Physiological: The need for Basic **Comforts**: Water, Sanitation, Hygiene

3. Now explain that each of these heading will be represented by a symbol.

    1. Improve = scarf
    2. Smart = flower
    3. Knowledge = paper
    4. Respect = stick
    5. Belonging = bunch of leaves
    6. Security = rock
    7. Comforts = shoe

4. Draw a matrix on the ground and arrange the seven categories (represented by a symbol) *along the x and y axis.*

5. Now gather everyone around the matrix and ask them to compare between the two items going down the y axis as against the x axis, skipping those which are the same:

    What do they gain from being a member?

    What needs have been met the most?

    Eg. The need for respect or the wish to become a very good mother/wife
    The need for respect or the desire to be smart with a nice orderly home

The need for respect or a desire for knowledge and education
The need for respect or the enjoyment of being together with other women
The need for respect or the sense of solidarity with others who will help if needed
The need for respect or the desire for possible benefits like cement

6. Listen to the response as everyone shouts out the most important of the two, and take the loudest response. If is it doubtful ask for a vote, by raising hands.

7. Put the appropriate symbol in each square e.g. a piece of paper, or a flower.

8. Continue until all squares are full. Now take a total of each and write in the box below each symbol

9. Add this to the report of each CHC by listing the total of each Need *(See Example below)*

	Scarf Improve	**Flower** Smart	**Paper** Knowledge	**Stick** Respect	**Leaves** Unity	**Rock** Security	**Shoe** Benefits
Scarf Improve	X	X	X	X	X	X	X
Flower Smart	Scarf	X	X	X	X	X	X
Paper Knowledge	paper	paper	X	X	X	X	X
Stick Respect	scarf	stick	paper	X	X	X	X
Leaves Unity	leaves	leaves	paper	leaves	X	X	X
Rock Security	rock	flower	paper	stick	leaves	X	X
Shoe Benefits	shoe	shoe	paper	shoe	leaves	rock	X
Total	2	1	6	2	5	2	X

ANNEX 11. Findings from ten Pair- Wise Ranking exercises (Makoni District, 2004)

1. NUMBER OF SUGGESTIONS FROM GROUPS BEFORE RANKING

	Ranked	Ruomb	Mutanda	Nyamidzi	Tanda	Tikwiri	Dumbam	Mutunga	Weya	Ngowe	Sanga	Total
Achievement	7th	1	0	0	0	0	0	0	0	0	0	1
Aesthetic	6th	3	0	1	1	1	0	0	0	0	1	7
Esteem	5th	0	3	1	0	5	2	0	1	1	0	13
Physiological	4th	10	7	0	0	3	0	0	0	1	0	21
Belongness	3rd	7	8	2	7	5	2	2	11	4	2	50
Cognitive	2nd	7	8	6	15	9	3	4	9	6	3	70
Safety	1st	3	13	5	13	10	4	6	6	10	6	76

2. ORDER OF SUGGESTIONS AFTER RANKING

	Ranked	Ruomb	Mutanda	Nyamidzi	Tanda	Tikwiri	Dumbam	Mutunga	Weya	Ngowe	Sanga	Total
Achievement	7th	6th	6th	6th	5th	6th	4th	4th	5th	6th	4th	52
Aesthetic	6th	4th	6th	4th	4th	5th	4th	4th	5th	6th	1st	43
Esteem	5th	7th	5th	4th	5th	3rd	3rd	4th	4th	4th	4th	43
Physiological	4th	4th	4th	6th	5th	6th	4th	4th	5th	4th	4th	46
Cognitive	3rd	2nd	2nd	1st	1st	2nd	2nd	2nd	2nd	2nd	2nd	18
Belongness	2nd	2nd	2nd	3rd	3rd	3rd	3rd	3rd	1st	3rd	3rd	26
Safety	1st	1st	1st	2nd	2nd	1st	1st	1st	3rd	1st	1st	14

Hypotheses Tested

1. Higher Needs are only felt when lower needs are met

2. Members aspirations move up the hierarchy with duration of membership

3. Maslow.s Seven Needs allow categorisation of most felt needs

4. Most of the active members have met most of the Needs

5. Men stress esteem needs more than women

ANNEX 13.1. Interview Respondents Personal Data

Inter-view	Tape	Observr	Inter-viewer	Name	Sex	Age	Level Educat	Club name	Year joined	# health session	Income Gen	Aids Carer Project	In Literacy Project	Position in club	Spouse present	# children
1	1.A	Juliet	Josephine	Naboth Toriro	M	50	O level	Rujeko	1998	+20	Fence making	No	No	Member	yes	3
2	1.A	Juliet	Morgan	Mrs Mukasa	F	50	Gde 7	Rujeko	1996	+20	S + O + PN + V	patient	Tutor	Nutrition Promoter	Yes	6
3	1.B	Juliet	Josephine	Mrs Toriro	F	58	Std 6	Rujeko	1995	+20	S + V + F	Trainer	WC	WC	Yes	7 grand 2 orphan
4	1.B/ 2A	Juliet	Josephine	Joyce Rufu	F	44	Fm 2 (RJC)	Budiriro	1999	+20	O + P + S + B + F + S	Trainer	No	WC	Part-time	5 own 2 orphan
5	2.A	Juliet	Josephine	Esma Marwiza	F	33	O level	Nyazonya	1997	+20	O + P	Carer	No	Vice Sec	yes	5
6	2A	Juliet	Josephine	Jesina Chimombe	F	63	Std 4	Nyazonya	1997	+20	O + P + B	No	Student	Treasurer	Yes	8 (3 alive) 5 orphans
7	2B/ 3	Juliet	Josephine	Loise Nyanzara	F	48	Std 6	Chinowara	1997	+20	S + O + P	No	Student	Member	Yes	5
8	3A	Juliet	Andrew	Teresa Kanyninye	F	40	Gr.7	Chinowawa	1998	+20	S	Trained	Student	Member	Yes	6
9	3B	Juliet	Andrew	Molen Chikwenha	F	54	Fm. 2 (JCE)	Chinowara	1996	+20	B	Carer 6 clients	Student	Chairlady	Widow	6
10	4	Andrew	Josephine	Emilia Kwipa	F	44	Gr 7	Chenisai	1997	+20	Sa + B + S	Carer	No	Member	Widow	4
11	4	Andrew	Josephine	Monica Mawango	F	42	Gr 5	Chenisai	1997	+20	B + V	Carer	No	Member	No (in town)	8 5 at home
12	4	Andrew	Josephine	Jenifer	F	51	Std 4	Chenesai	1997	+20	O	Orphan	No	Vic Sec	Yes	5
13	5	Juliet	Josephine	Alice Ganya	F	60	Std 2	Zvatakana	1999	+20	V	No	Student	Member	Yes	2 own 4 grand
14	5A	Juliet	Josephine	Lydia Siwera	F	27	O level	Zvatakana	2000	+20	V	No	No	Member	In town	2
15	5A	Juliet	Josephine	Rosa Kudoma	F	72	Std 3	Zvatakana	1999	20+	none	No	Student	Member	Widow	5 grand/ 1 orphan
16	6A	Juliet	Andrew	Chipo Mawanbira	F	49	Gr. 3	Kumboyeda	1996	20+	O	No	No	Treasurer	In town	1 at home; others in town
17	6A	Juliet	Andrew	Lita	F	27	O levels	Tamuka	1997	20+	P	No	No	Secretary	Un-married	5
18	6A	Juliet	Andrew	Loyce Munukwa	F	70	Std 2	Tongogara	1998-2001	20+	P	Orphan care	No	Treasurer	Widow	4
19	6B/ 7	Juliet	Josephine	Florence Petro	F	34	Fm 3 ZJC	Mapfuti	1998	20+	None	Carer	Student	Member	Yes	4
20	7	Juliet	Josephine	Simisai	F	35	O levels	Member	1999	20+	O	No	No	Member	In town	4

ANNEX: 13.1.1. Reasons for joining the club Section 9.1.1.1.

Knowledge	10	Learn, get knowledge
Social Interaction	8	Join others, be the same, interact, share
Health	5	Health, hygiene, diet, nutrition
Self improvement	4	Improve self: health, knowledge
Gain	4	Get something, inputs, support family
Change	4	Improve home: living standards
Curiosity	3	What is going to happen, meet there, find out

1	M.50	O lev	**Did you think, I will join the club for a certain reason?** No, initially when we joined the clubs we joined with the aim of trying to hm.. develop our families. May be if we had some white guys coming as donors we are actually looking at it whereby they would actually help us on problems where we cannot help ourselves, like machinery, like start up capital for whatever we want to do. Maybe that way. With ZimAHEAD that is the only organisation we have started off with here. Then of late we have started off these other ones with Matewa but I wasn't here. I was in town. I haven't seen any problems at all. And I still want ZimAHEAD to get more funding so that we can expand it. *(recorded at end of interview)*
2	F.50	Gde 7	At first I just joined the club just to join others. I didn't have an objective.
3	F.58	Std 6	Not asked
4	F.44	Fm 2 (RJC)	The first thing I wanted to know , 'what is going to happen there?' The second thing I wanted to know. 'Am I going to get something? Am I going to improve my life? what actually am I going to meet there?' many things and then I had to join and obviously I met all of these missions.
5	F.33	O's	I wanted to increase my knowledge of health and how to improve my hygiene and living standards.
6	F.63	Std 4	It is very useful. I am able to support my family. All this helped me.
7	F.48	Std 6	I wanted to earn and to change
8	F.40	Gr.7	I joined the club because I wanted to learn from others. We were not promised anything but I only wanted to be with other people. We didn't expect to get anything.
9	F.54	(JCE)	I wanted to learn and I wanted to know what the club was all about and to learn more
10	F.44	Gr 7	I wanted to socialise with others so that I can get company
11	F.42	Gr 5	**I joined because I wanted to learn more about health and hygiene since we were not actually practicing good hygiene in our area.**
12	F.51	Std 4	I wanted to see change and development at my home and that why I wanted to join the club.
13	F.60	Std 2	She wanted the knowledge on food production, how to prepare good diet , nutrition, so I become a really good person who is healthy.
14	F.27	O's	To get knowledge and to join other women, share experience with other women. Social life and have friends.
15	F.72	Std 3	I wanted to join because I wanted to acquire knowledge and I really enjoyed and it is good for me.
16	F.49	Gr. 3	Not asked
17	F.27	O's	I joined because I wanted to learn and also interact with other s and also maybe get some type of inputs to uplift our living at home.
18	F.70	Std 2	The major reason was that I wanted to do whatever everyone else was doing, so that is why I joined the club.
19	F.34	ZJC	Not asked
20	F.35	O	I wanted to learn more about health levels

ANNEX: 13.1.2. Reasons for attendance at Sessions Section 9.1.1.2.

Why did you attend so many health sessions?

Knowledge	11	Mentally stimulated, need for knowledge, Interest
Variety of topics	9	Different topics
Practical application	5	helping us in our life, helping family, practical
Wanted to complete	5	I didn't want to miss even one of these, would like to repeat
Competition	3	compete with others
Sociability	2	meet many other people

1	M.50	O's	Not asked
2	F.50	Gde 7	She is saying she managed to sail through the twenty sessions. She is saying she wanted knowledge and each lesson was a follow up of the previous one so she wanted to have all the sessions. **So she was interested in the knowledge? Was there any other reason she went to the sessions? Like maybe to see her friends or have a nice time?** It was interesting for her because she would meet many other people and she would forget about her problems at home.
3	F.58	Std 6	About 20 (finished) There were different topics. We liked the topics because as we were learning. We found they were helping us in our life. Like for eating…we just used to wash in one dish so we were told to have the pouring method. We used to eat sudza in one plate, three or four people together but now we are eating one for her plate and even this project came through the health sessions.
4	F.44	RJC	I didn't count but it is around 25 to 30. It is something I wasn't aware I didn't count. You know when we were given those green cards they had topics. So I didn't want to miss even one of these. **Were they all interesting topics?** All of them. All of them. I liked them even if the EHT would like to repeat, I would like to repeat. **Which was the most interesting topic, that you didn't know about?** How can I say? Maybe… The breeding of malaria. I wasn't sure how… I thought *every* mosquito can cause malaria but when we had the lessons now, I was told only the anopheles, the female mosquito… then I came to know…'Oh, so its not all the mosquitoes'.
5	F.33	O's	I made all the topics on that card. I wanted to understand everything because it was so informative and interesting.
6	F.63	Std 4	I wanted to know. I was curious to know about those lessons
7	F.48	Std 6	I needed to know every topic so I was not even absent one day because I wanted to follow up and get all the information.
8	F.40	Gr.7	After every session she wanted to learn more. So she had to complete all the sessions. And she also wanted to compete with others to actually answer all those questions on the card
9	F.54	JCE	I kept on wanting to learn more about the health issues
10	F.44	Gr 7	I felt I should complete all the sessions so that in the end I would regret to say I didn't do this or that.
11	F.42	Gr 5	Because I wanted to get all the health sessions done, and I didn't want to remain behind. I was also a member of the drama, so I also wanted to participate all the time.
12	F.51	Std 4	I didn't want to remain behind. I was always curious to see what would happen in the end. And each topic was very interesting.
13	F.60	Std 2	Yes, although at times I did not attend because of illness or deaths, but I

			completed my card, and I graduated. Those lessons were very good. We were mentally stimulated so much so that we wanted to know every topic. **Is that what she said, 'mentally stimulated'?** Yes she said her head, her brain was woken up, you know that means stimulated. Brain stimulation.
14	F.27	O's	I think I did 19, and I missed only one because I was sick. I wanted to learn more because they were different topics
15	F.72	Std 3	I have never stopped attending these lessons, unless there was a funeral or I was sick
16	F.49	Gr. 3	Most of the lessons were educational so I acquired a lot of knowledge from them. Firstly it was only for my family, now I can also help others. I see that they like that knowledge that I have so I always help others.
17	F.27	O's	The lessons were so interesting so I wanted to learn more and get new ideas from each and every topic.
18	F.70	Std 2	Always after attending a session and practices what we were taught so all the time I wanted to get more and more knowledge and maybe influence my practices so as to realise some improvement all the time.
19	F.34	ZJC	I wanted to know about health and each topic was different.
20	F.35	O's	I have done all the sessions and I have graduated and have got a certificate. All those topics are very useful, you learn a lot from then and I don't want to miss them so I made sure I attended all the sessions.

ANNEX: 13.1.3. Attraction of the Health Club Section 9.1.1.3.

Key

Knowledge	11	Learning about disease, farming, health
Social Interaction	10	Sharing ideas, meeting people, socialising, togetherness, mutual encouragement, in the team
Competitiveness	6	Sport, netball, running, athletics
Performing	6	Drama, poems, singing
Self reliance	4	Earning money, supporting family, Income gen. projects
Self improvement	3	Home improvement, improved hygiene practice, fitness
Happiness	3	Enjoyment, fun
Self Efficacy	2	Self pride, achievement, different from others

1	M.50	O lev	**The idea of bringing people together. You get ideas from this one and that one and that one. So you learn everything. You share your knowledge. I did enjoy it. Because to me it had a direction of the real life we are supposed to live.**
2	F.50	Gde 7	She is saying it is knowledge. (Later) She is saying (again) it is knowledge. Because she is now applying that knowledge in her day to day living.
3	F.58	Std 6	What I enjoy most is growing and selling because I am getting a lot of money from these activities. From the herbs and from the fruits and even in the gardens from the drip kits we grow tomatoes. If am going to add my total it is up to Z$30,000 in just two beds (just from tomatoes) **How much do you get per month if you add everything?** If I joined them all I run up to 150,000 to 200,000 per month. *N.B.(the equivalent of the salary of a project manager in ZimAHEAD!)*
4	F.44	Fm 2 (RJC)	In the club what I enjoy best is when we introduce dramas, activities like playing netball. Sport I enjoy a lot. I am imagining *(it)* as we are already there ….laughing
5	F.33	O's	I like the club competitions, netball, running, drama, music. I really enjoy that and physically we are now fit.
6	F.63	Std 4	*Maiway (Wow!)*…I can not explain how much it helps! Selling soap doing what to help my family. It is only now we are not able to go and get tallow. Even when you look at me I am different from other old women because of the club.
7	F.48	Std 6	My activities I like are netball and running.
8	F.40	Gr.7	She says the club actually makes her encouraged to keep on doing more and more and also getting new ideas from other club members.
9	F.54	(JCE)	We are doing some drama, poems and netball.
10	F.44	Gr 7	I enjoy meeting with others and sharing ideas with other members.
11	F.42	Gr 5	Not asked
12	F.51	Std 4	I enjoy sporting activities since they remind me of my childhood. And also I enjoy socialising with the other and learning more about farming activities.
13	F.60	Std 2	It is the knowledge I get from the health club. When I get back to my house and practice is among my family, among my children, I find it very very good for me.
14	F.27	O's	Netball
15	F.72	Std 3	**This knowledge and the discussions we have in the lessons. I enjoy it when you answer questions. Laughing. You have time to laugh. Have some fun.**
16	F.49	Gr. 3	I always enjoy meeting other people and learning more from others.

			When ever I know this is our meeting day I am very happy because I know I shall get one or two ideas from others. When the EHT came around he called for a big meeting and told us he wanted to give us more knowledge and maybe share ideas on how they are going to prevent diseases, so that's why I joined the club so that I could also learn how to prevent diseases and also to get any other ideas from the others around.
17	F.27	O's	I enjoy all the lessons but I enjoy the drama most.
18	F.70	Std 2	I enjoyed learning about preventing diseases and good hygiene and all this is very interesting. So that is what I enjoyed.
19	F.34	ZJC	Not asked
20	F.35	O's	I most like health education, and even netball I like, I am in the team.

ANNEX: 13.1.4. Perception of gain from Health Club Section 9.1.1.4.

Knowledge only	6	Training, knowledge
Inputs only	5	Toilets, machines, cement, drip kits, IG projects, selling
Both equally	5	Knowledge and inputs

1	M.50	O's	Not asked
2	F.50	Gde 7	She has embarked on income generating projects and can now process oil out of sunflowers.
3	F.58	Std 6	From the knowledge. I was nothing and I am now training others and doing my own piece jobs if I am not out and so I am getting a lot.
4	F.44	RJC	I have benefited. The cement yes, I had the toilet already with the two doors, I can say. With the machines, yes, I am still benefiting because we are having produce from the machine. I am having oil every day. I just make my oil, which is very easy to make. From the drip kits, which is helping a lot. It's only this three past months when we had no water, but otherwise from May when I was given *(the drip kit)* I had a lot of vegetables, tomatoes, beans, every crop which I put in that garden it was OK for.
5	F.33	O's	Of course we benefited. We got the knowledge. We were given processing machines which took off the burden from us. We used to grind using the stone. But now the burden is off. We are doing our own processing. Now I have got a drip kit. Growing vegetables. All that I benefited from the health club.
6	F.63	Std 4	Bee keeping, we are selling honey. We are using the honey as medicine for chest pains. Cement for the toilet and it is only the drip kit I don't have and I have got water that doesn't finish and as an old women I would love that.
7	F.48	Std 6	Not asked
8	F.40	Gr.7	She is saying I could not make a comparison between the inputs and knowledge because they could be the same. The inputs compliment the knowledge she had.
9	F.54	JCE	Not asked
10	F.44	Gr 7	I didn't benefit in terms of inputs but I benefited in terms of knowledge.
11	F.42	Gr 5	I benefited in terms of knowledge and inputs. I got cement to put up a toilet and also I got an oil pressing machine which is at my homestead at the moment, and I have groan a lot of sunflowers for this year.
12	F.51	Std 4	I benefited more in terms of knowledge in the clubs although we could do some of the practices but we didn't have the health knowledge, although we also benefited from the oil pressing machine, but I think the most was the knowledge.
13	F.60	Std 2	They only got a (sewing) machine but did not get a drip kit.
14	F.27	O's	I have both
15	F.72	Std 3	Yes, I got cement for the Blair toilet.
16	F.49	Gr. 3	I think we benefited more from the knowledge but also the inputs were very important because they supported what we have been taught.
17	F.27	O's	The inputs were also very important because with the knowledge we couldn't go any further. When we got the cement we managed to build our toilet. So I can say both of them, the knowledge and the inputs were very important to us.
18	F.70	Std 2	We did not get any inputs in our clubs, so I regard knowledge as something which we benefited more in attending the health sessions.

19	F.34	ZJC	I benefited from the knowledge, I did not get inputs.
20	F.35	O's	Not asked

ANNEX: 13.1.5. Expectation of Health Club Section 9.1.1.5.

Have your expectations been met?

1	M.50	O's	Not asked
2	F.50	Gde 7	In fact she is saying she was promised to be given cement for the construction of the well in the clubs but when they completed the sessions they were not given the cement so they were disappointed. ***Well, the reason for that was because the funding all over Zimbabwe went down at that time and we (ZimAHEAD) were also hoping to help but that never happened because of outside experiences. (political withdrawal of donors)***
3	F.58	Std 6	We have met them but we are still expecting more from what we have put in.
4	F.44	RJC	I learnt a lot.
5	F.33	O's	I have got the knowledge now. I can also teach other people and I am using this so all my expectations have been met.
6	F.63	Std 4	What I expected has been fulfilled. When I look back to my last days compared to what we are doing now it was very different. I feel very proud and motivated when I talk about this.
7	F.48	Std 6	She is quite happy, after years of voluntary work. Especially now with the drip kit she just puts water in the drip kit and goes and does her voluntary work and the garden is doing well. The people who I know, are showing a very big change within their home environment.
8	F.40	Gr.7	She thinks they have been met.
9	F.54	JCE	missing
10	F.44	Gr 7	My expectations were met since I joined the club in order to know more.
11	F.42	Gr 5	My expectations were met since I joined the club so I could also teach my family especially children, and now I can see them practicing good hygiene
12	F.51	Std 4	I think they were met and this is why I want Zim AHEAD to continue. Like the beekeeping project. Although I actually got stung and dropped that project, but we like to have more like this.
13	F.60	Std 2	I got the knowledge but you know, you always want more. I would have loved the drip kit and some seeds. So that my garden become a nutrition garden...*laughs.*
14	F.27	O's	Yes, they have
15	F.72	Std 3	When I can I was expecting only to learn and then I was given cement and I was very motivated.
16	F.49	Gr. 3	When we joined we were actually told we are going to learn about disease prevention so I think my expectations were met although we didn't get a lot of inputs but I think on the knowledge part all my expectations were met.
17	F.27	O's	My expectations were met since I got the knowledge and I also got some of the inputs. So I think everything was done properly.
18	F.70	Std 2	Not all my expectations were met, as some clubs got cement and machines and our club didn't get that, although we managed to pull through with self reliance. We would also like to see a situation where we also get inputs like oil pressing machines.
19	F.34	ZJC	Definitely I needed the knowledge, if you have the knowledge you can do what you want to do.
20	F.35	O's	missing

Summary of examples how expectations were met

Latrine	8		Compost pit	1
Family well	8		Decorated kitchen	2
New living rooms	4		Order/smartness	7
Shower/bathroom	3		Clean environment	1
Nutrition garden	9		Trained as builder	1
New cooking utensils	2		Helped others	1
Individual plates	2		Payed for schooling	1
Pot rack	4		Good knowledge	2
Sink	2		Paying netball	1
New utensils	2		Wash hands	1
New borehole	1		Use latrine	1

ANNEX: 13.1.6. Future commitment to Health Club Section 9.1.1.6.

1	M.50	O's	There is nothing wrong with continuing in the clubs because I still feel I have a role to play with the community.
2	F.50	Gde 7	**She is saying she will continue in the clubs because she is acquiring knowledge and that knowledge is very useful in her daily life and again she is in income generating projects like oil processing and they are enjoying very much the benefits of that and they can even get some money to send their children to school. Has she made money herself, like last year how much money would she have made?** Last year because of drought they didn't have enough to sell. During the good times they can make some Z$8,000 per month *(each)* out of the processing. *(RoE Z$3,500: US$1)*
3	F.58	Std 6	Not asked
4	F.44	RJC	Really I will, I have to die there! .... *Laughs*. It keeps me fit. Because every day I have to be presentable. When you meet me you have to know this is *somebody* in this ward. So it keeps me smart and keeps me healthy and fit.
5	F.33	O's	I will continue. To learn and learn and learn. I will not get out of those clubs
6	F.63	Std 4	Not until I die will I ever leave. I am a member and I will never stop.
7	F.48	Std 6	I will continue to be a member. I will continue to learn. I want to continue. The unity, the relationship, the knowledge... I want to continue acquiring these and having this unity with my friends.
8	F.40	Gr.7	She wants to continue. Staying in the club will lead to better living standards. You have a clean home. You have clean water and you also have knowledge and you meet with others and socialise.
9	F.54	JCE	missing
10	F.44	Gr 7	I will like to continue with the club because I like to interact more, for instance it you get into activities like sporting activities, our bodies will stay healthy since we will be having good exercise.
11	F.42	Gr 5	I will like to continue with the club because it has helped me in so many ways. Recently I got all my property stolen at my homestead and all the club members came in with their assistance in terms of clothing and other things. So I regard the club as very, very important.
12	F.51	Std 4	As long as I am still living I will keep on staying with the health club. All our expectations were met and as long as we keep on continuing, we will get more and more knowledge
13	F.60	Std 2	As long as I am alive I will continue with the health clubs. Because I want a good life.
14	F.27	O's	We need some progress because we want to play netball but sometime we don't have a ball.
15	F.72	Std 3	Until I die I will never stop. It is good. It is good. There is a lot I have still got to learn
16	F.49	Gr. 3	Not asked
17	F.27	O's	I will continue in the club since I gained quite a lot in terms of knowledge and I think there is still quite a lot of knowledge coming.
18	F.70	Std 2	If I look back at my life before joining the club I think that has been some great change in the way I am now living, so I think I will continue staying with the club and maybe one day our expectations will be met.
19	F.34	ZJC	I will definitely. We are quite happy to be in these clubs because we acquire more knowledge each time. We know about HIV and how to survive. If you have got it. All that knowledge is very good for us so I will not leave the clubs at all.

20	F.35	O's	missing

ANNEX: 13.1.7. Recommendation of the Health Club Section 9.1.1.7.

If you would recommend the clubs to other people what would you tell them?

How many people have you persuaded to join the club?

			Number persuaded to join	
1	M.50	O's	*Not asked*	*(I would tell them)* when you join the clubs there is a lot of change in your life and lot of change in families. You learn more in life when you join the clubs. And that is very true.
2	F.50	Gde 7	4	I will be telling them that if you go to a health club you will learn a lot of things and when you acquire that knowledge you can apply it at home. So please go and join. (four people)
3	F.58	Std 6	10	We are telling them that if you join the health clubs things which are coming are easy for this project. We don't just give to someone who didn't have the lessons. A person must have full information and be taught how about health. After graduating then she will join the project. **Do you think that is a good idea? Is that a useful way to do things or does that cause problems in the community?** No, it is the right way to do it. Because if you just take a person who didn't go to school... those who went to school will be worried. We want to start from the school then join the projects. **Does that help them to make the projects succeed or is it the same if you took someone not from the health clubs, would it be just the same?** No, it helps them, because if you take one who didn't go to the lessons he or she will boast. 'You wasted your time. See. I didn't go to school but I am now in the project.' **So you mean it is more fair?** Yes. Have you persuaded some of those people who are not in the clubs to join the health clubs? **Yes. As for now I have got a list of 10 in this village and then some are in Chenemberi, Kadzunge, and St John's.**
4	F.44	RJC	Not asked	Not asked
5	F.33	O's	10	Not asked (about ten)
6	F.63	Std 4		I preach about it at the well where we fetch water, in the road. Anywhere ...I tell them about the health club, and they have experienced and some will accept and some will not. I am the one who started it and I called the EHT to come here, and persuaded many people to come here.
7	F.48	Std 6	25	I would tell them how good it is to practice home hygiene, all this that we learn in the club because that will prevent diseases from their families. One will improve economically, socially and emotionally. Ah so many. 25 have already graduated. I have group 2 & 3 who are organised and I just help them before the EHT comes. *(She is a health worker)*
8	F.40	Gr.7	8	I would tell the person it is good to join the clubs because you learn quite a lot about disease prevention, HIV/AIDS issues and also. ...

				She has managed to influence 8 people and all of them have acquired their certificates.
9	F.54	JCE	12	I would actually take the person to my home and show that person what I have acquired after having joined the club. I have persuaded 12 people to join the club. All of them were in the first club and have all completed their lessons.
10	F.44	Gr 7	6	We would explain about what we have learnt. It could be health issues or other issues. I managed to persuade six people who are all my neighbours to join the club.
11	F.42	Gr 5	5	We used the drama method most of the time to encourage others to join the club. Say after the church services we would do a drama depicting good and bad practices. Before we hold any other meetings we would also hold dramas, so that actually helped a lot to encourage people to join the club. I managed to persuade five people who were actually my relatives and they joined the second group after I had graduated.
12	F.51	Std 4	2	We would tell them we want to raise our families in the health environment and try and prevent all the disease at home before visit the hospital. I managed to persuade two of my young sisters to join and they are in the second group.
13	F.60	Std 2	10	We encourage them to join health clubs. We tell them there is a lot of knowledge that will change your life, within your home, within the environment, and how to live with other people. I really tell them how good the clubs are and I tell them to see the change within the club members. I have got ten members.
14	F.27	O's	Not asked	I would invite them to my home so that they see the changes within my village. I would talk about HIV, the topics that I know as I realise one can learn things that one has not known before. We are the last group. Unfortunately there are so many people who want to learn but because we have no EHT there are many people waiting.
15	F.72	Std 3	1	Even if you don't tell them, they will see. A good example of how much our lives have changed. They will tell you. 'Ah these are the health people' before we say anything and they will say, 'these are good people'. **Is there any similarity between the health people and those who are in the church groups?** The difference is that the health club members they go and help, they don't just kneel down and pray. That is the difference. So I do both: the church and the health. *(Apostolic Faith).* **Is there any clash between the two?** Of course the club activities the church likes. **How many people have you persuaded to join the club ?** My daughter in law. We have some who are waiting but there is a lack of teachers.

16	F.49	Gr. 3	10	Say if one were visiting my homestead I would show them around and tell them that they could also have facilities like toilets and a family well, and also take them around to my vegetables garden and show them the vegetables that I have and try and explain to them that we need to eat nutritious food to keep us healthy and this is what we have been taught in the clubs. **How many people have you persuaded to join the club?** I think I have managed to persuade more than ten people to the club.
17	F.27	O's	10	I would tell the person to come and get the knowledge we also got and also if there were some little inputs that person would be persuaded to join the club. I think I have persuaded more than ten people or even more than that
18	F.70	Std 2	2	In our area there are only two members who joined the club but we always try to persuade some to come by telling them that the club is good for your own health. You will stay healthy if you get knowledge that we are also getting at the club. So that's what we are telling people to persuade them to come and join
19	F.34	ZJC	Not asked	I tell them about health.... (end of tape 6) (Tape 7) and how good it is to have knowledge about health and how diseases can be reduced through using hygiene practices, and I tell them about the simple ailments of sicknesses and how they can be treated before you go to the clinic... these home remedies and first aid. This is what I tell them those who are not in the clubs.
20	F.35	O's	Not asked	I encourage them and say there is a lot you can learn from the health clubs. If you want you can join the adult literacy. It you want you will be able to keep your environment clean if you participate in these health lessons and activities.....

ANNEX: 13.1.8. Sustainability Of the Health Club Section 9.1.1.8.

How often do you meet as a club? And for what reason?

Regularity of meeting	#18	Activities	#22
Twice a week	1	health	8
Once a week	10	IG	9
Every two weeks	2	Problems/planning	3
One a month	4	sport	2
Irregular meetings	1		

1	M.50	O's	Not asked
2	F.50	Gde 7	Not asked
3	F.58	Std 6	We meet in the groups. We have got days when we health clubs get together. In Ruombwe, they come together and we meet them all the health clubs. **So they are still meeting?** Yes. St Johns these days are not meeting but Kudzunge and Chinemberi are meeting their days. **And Rujeko? This club here?** They meet sometimes on Fridays. **And how many members?** They don't come all. They just come this week, maybe 10 or 12 because some have got some piece jobs (farm work) **When you say they come, do you mean they come for their projects?** No. They have got a health meeting once a month, they meet all together
4	F.44	RJC	We usually meet once in a month. We are only reminding others of small group problems in our group. Or either to ask them, 'what is the problem with your group', or whoever can raise the problem in any other groups. If there are no problems that will be OK but if there is a group with a problem then it is for us to give *(advice)*. So we usually meet once a month. **And that is even without your EHT. Because you haven't got an EHT now.** We haven't got. They are saying there is one but we don't work with him. *(He is newly arrived)* **He doesn't come to your group. He doesn't hold a health club. So you just carry on by yourself.** He is just coming to join the new groups now, which are going to start now. But since Hayisa went away *(previous EHT, to join Zim AHEAD)* we are just alone, I am doing everything.
5	F.33	O's	We meet once a week. We will be doing our activities…oil processing, making soap.
6	F.63	Std 4	At times twice a week, on Wednesday when we are preparing to play netball, and we meet on Fridays.
7	F.48	Std 6	We meet on Wednesdays. We teach each other about health and we will be doing our projects.
8	F.40	Gr.7	They often meet, twice a month on the 15th and the 30th to arrange for their soap making project. **Is that going on now? (given the economic crisis in the country)** They are no longer making the soap but they are actually ordering ready made soap for sale and oil. It is very difficult to get tallow, but if they get tallow they make their own soap. **Who do they sell to?**To the village, the local market. **Is it popular, is it needed?** To sell forty bars of soap will take less than a day, they would have sold them all. **Do they sell it so well because it is a lower price or what?** We sell it for Z$5.500

10	F.44	Gr 7	We meet once or twice a month but we don't have a fixed schedule depending on whatever issue is to be discussed.
11	F.42	Gr 5	We always meet but we don't have a fixed schedule. But we meet if we have any other meetings. Say like the AREX officer coming to address and before she arrives we first of all have our health education sessions ourselves. Or even at church, say after the church services, we also get engaged in health club issues.
12	F.51	Std 4	We meet once in a month, we meet to plan and evaluate our ongoing activities.
13	F.60	Std 2	Once a week we meet. We revise and find out and follow up whether we are practicing what we have been learning, and encourage each other what to do. **It is purely for health: they don't meet to talk about their projects?** We discuss about health and income generating projects.
14	F.27	O's	Every Friday afternoon, we are playing netball, but when it is summertime we will be very busy in our fields. **Where do you get the netball?** We borrow from schools and some days we don't get it.
15	F.72	Std 3	Twice or three times a month. We teach each other about health because some will forget.
16	F.49	Gr. 3	We always meet once a week during the dry season, when we have sunflowers we will be processing the oil. And during this wet season when we don't have oil, we always meet to remind each other, especially in the prevention of malaria, we always tell each other, we must use mosquito repellent, to tell our children to put on long sleeve clothing and also to close our windows early and also to send people to hospital earlier. I think there has been a reduction in malaria cases around. If we don't have coils in our house we always use cow dung to burn. Also now that people cut grass around malaria has actually been reduced. Some people have mosquito nets but some don't.
17	F.27	O's	We always meet once every week and especially this time we are always doing some revisions of all those topics we did long back
18	F.70	Std 2	We meet once every week to discuss and plan and find ways of solving problems and at times visit members homesteads and evaluate and see whether those members are still practicing good health and hygiene.
19	F.34	ZJC	Every Wednesday. We have different activities. Even those who do not have projects, they do something.
20	F.35	O's	We meet every Wednesday, to talk about health education and because our projects are not functioning well (because we had a drought last year and there were no sunflowers). We have planted this year and if all goes well there will be something. *(sunflowers for pressing oil).* The peanut butter press is working but they wish they could have an electrical one. **When they meet is the EHT present?** At times he comes, at times he doesn't. When he doesn't come the chairman of the health club takes it.

ANNEX: 13.1.9. Voluntary statements Section 9.1.1.9.

1	M.50	O's	**I still feel given the chance of maybe having meeting regularly here and there we can always stand up and say it is important that we work in group system for the benefit of development in whichever field.** So this problem with Rujeko Club.* It has been going since 1996, nearly eight years, and the membership now is lower... We don't have the membership now *(the club is split into small IG groups)* **So do you think that a club that have been going for like 6 or 7 years is difficult to sustain the club for that long. It has been going for so long now that people have fallen away?** No, no, not really. It is not the club. But I think maybe people need that motivation each time maybe when you sit down at meetings and discuss about issues. That same issue you discuss it each time with people when you meet. You can tell them, 'no, no, no, when we have problems here or there you can still make it if you ..do this or that.' And people must expect.. they must have enough hope from leaders that even if things go down, one day they can still go up. Like right now, we are having a drought situation or economic situation with the government at global level, whereby you know things are getting difficult for almost everybody ... government, big companies, and everybody else. So you can imagine if these new clubs starting up when they see things going that bad they also drag behind and think 'This is life.'
2	F.50	Gde 7	Not asked
3	F.58	Std 6	Not asked
4	F.44	RJC	I would like to add something about the herbs that became something very important around this ward. You know at first people didn't believe that something like a small plant can help them. But when we come to use them... You know it was done practically... Introducing and using at the same time. You know it is helping a lot. In this area we haven't got a clinic near us. Only Nyamidzi Clinic 30 kms away from us or Mt Zuma behind there about 30 kms from here, so people are relying on herbs. If you come to my garden they are now shrubs because of being used. When I am away now *(there will have been)* 3 or 4 people coming to my house. 'Where is she. May we have the herbs?' This is happening. One have got stomach ache, one have got herpes, one have got this and all that we are curing with herbs. **Do you think the herbs can be misused at all? Have you had problems where someone may have been sick from taking them?** We haven't met that yet. No. I haven't met any problems. Any herb that we have taken then just *(the clients)* recommend, 'This was wonderful. This has helped me a lot?' **Where did you get the information? Where did you find out about it?** When we went for the workshops in Dumbamwe with Josephine *(ZimAHEAD)* they brought up those from Fabidzanai *(another NGO)*, they introduced every herb to us and how you use it, and we were taking the notes. So from those notes now we can use it even by head.
5	F.33	O's	I am so happy, that you *(Josephine)* went back to Amai *(Mother)* Waterkeyn and told her *(to come)*. Because now we are people empowered and now I am being counted among those in my family and other people *(can know me)*.
6	F.63	Std 4	**Some problems are those that the needs are too big, specially with the orphans. I would like this drip kit so I also rest. And I want to be an example for those around me.**
7	F.48	Std 6	She is so happy with what has happened and asks for more support in

			what we are doing.
8	F.40	Gr.7	We would like to thank all the health club members who now meet and socialise. We don't hate each other. Each one has got her own toilet, safe water and also the issue of herbs is also helping us quite a lot.
9	F.54	JCE	missing
10	F.44	Gr 7	I would like to thank those who brought the idea of the health clubs since this has made us to stay healthy and we will always stay healthy as long as we practice good hygiene
11	F.42	Gr 5	I would like to see more activities in club activities amongst my children Right now one of them is secretary in the beekeeping project. So I would like to see them continue such activities.
12	F.51	Std 4	
13	F.60	Std 2	All in all this program has helped to improve my life, the relationship with my family now fine.
14	F.27	O's	I don't have anything to add
15	F.72	Std 3	**I am so happy. I didn't know I would get such a lot out of these health clubs.**
16	F.49	Gr. 3	I would like to get more support on the project and if those projects could also involve the orphans and the widows. Especially for those HIV/AIDS problems. A lot of families are now being headed by children. Those children are no longer going to school and they don't get enough clothing. So if there can be some ideas of helping by introducing some projects.
17	F.27	O's	I don't have anything to add.
18	F.70	Std 2	Although our club has remained in tact, we would probably like to get more training like how to make soap, how to process the oil so that women could get some income during these hard times. Maybe we could also get ideas how to revive the poultry club, and I think with that the club would really become something very meaningful in our lives.
19	F.34	ZJC	I wish if this could continue, the health club movement so that we remain united helping each other, supporting each other. I can say that I need this and that, because we should help ourselves and become self reliant.
20	F.35	O's	missing

*** This ward of Respondent 1.2. & 3 is the only one where there are tensions in the health club leadership and the income generation projects have caused divisions between the members (See Future Research Ruombwe Ward. Section 11.6.8.**

ANNEX: 13.2.2. Main Value for Self Section 9.1.2.2.

Key

Family	12	Caring for family, protection of family, family values
Self reliance	9	Poverty, enough food, growing food, better living standards
Self discipline	6	Correct behaviour and values, strength
Health	6	Health, good home hygiene, care of home, cleanliness
Knowledge	4	Value of knowledge, education, school, information.
Self efficacy	3	Independence, self sufficiency, coping, self-confidence
Happiness	3	Love, unity, togetherness, happiness, nurturing, neighbours

1	M.50	O's	My most important thing in my life is to see people develop whereby we all get off from poverty. That what I am looking at. Maybe we can get to a stage whereby everyone is self sustainable. **And that's more important to you than your family?** Same thing to my family
2	F.50	Gde 7	She is saying as a mother the most important thing is keep her family healthy
3	F.58	Std 6	Something important, me as a woman, is caring for the home and the children, educating them. I educated them and I even told them if you want something like a better life you must work for yourself so all my children joined the clubs. Three of them are in the paper making and one did book binding.
4	F.44	Fm 2 (RJC)	Laughs… most important to do? What is life for? Why do think we are here? What is the most important thing to you? Myself? …Laughs… maybe I can be lost *(difficult to explain)* but… what I can only think that I am important because I care for my family. That is one important thing I can say I am here for. Then to look for myself also its important…laughs….
5	F.33	O's	Caring for my family and this knowledge that I got. Now I am able to look after the whole family including the in-laws.
6	F.63	Std 4	To look after my family make sure they are fed well and living standards and even those grandchildren I want to see they have food.
7	F.48	Std 6	Caring for the family.
8	F.40	Gr.7	Working for herself is very important as a woman. *(Able to support herself)*
9	F.54	(JCE)	As a widow I regard my family as very important and also my other projects like agricultural projects.
10	F.44	Gr 7	I regard self discipline as a way of living and important thing in my life.
11	F.42	Gr 5	I regard self discipline as the most important issue in my life.
12	F.51	Std 4	I regard my family as something very important in my life. To stay together happily and growing up well as a family.
13	F.60	Std 2	One must be a master farmer, growing food. Because ones family needs to be provided with good food. A balanced diet. Then you are able to build your toilets and sell your products. So to have knowledge again on health and hygiene is very important in my life.
14	F.27	O's	Look after my children and working for them to have enough food, going to

			school .
15	F.72	Std 3	To look after my family. At times I fail but this is most important. At times you fail to get what you want to give them because of poor eyesight, what I want to do is not fulfilled.
16	F.49	Gr. 3	I regard my family as very important in my life and also self discipline. And also to love one another and especially my neighbours and cope in church and any other gatherings like health clubs.
17	F.27	O's	I regard self discipline as most important and also self reliance is also important
18	F.70	Std 2	I regard self discipline as very important in a woman's life.
19	F.34	ZJC	I am interested in these health clubs and farming
20	F.35	O levels	It is the discipline that I want and to care for my family and to care for my home and keep it clean.

ANNEX: 13.2.1. Self improvement Section 9.1.2.1.

How does the club help you achieve this?
- the things which are most important to you as a man or woman.
(Linked to previous question: See Main Value for Self)

Key

Understanding	15	Knowledge for prevention of disease, child care, marketable skills
Family care	12	Ability to nurture with good values and attitude, correct hygiene practices, nutrition to ensure survival/success of children
Self Reliance	11	Ability to earn, sell, support family, self sufficiency, financially viable
Good practice	8	Good standards of living, behaviour, hygiene practice
Self Efficacy	5	Sense of worth, achievement, self-confidence, value for self
Common unity	5	Trust, community networks, support from neighbours, social capital
Good Health	5	Freedom from diseases and common misfortune
Material inputs	3	Material inputs, sanitation, toilets

1	M.50	O's	Not asked
2	F.50	Gde 7	The education that we receive will help them to keep ourselves healthy
3	F.58	Std 6	The club helped me because we had workshops. When we did those workshops we were taught those things to help us as this project. We didn't know how to run them so we were being taught how to manage, and how to keep our money in a good budget.
4	F.44	RJC	It helps me because now I have no problem, I have nothing to think too much that except instead of just asking my husband, what to do next, I can just do it myself. Its also surprised him that I have got something from the club. 'Don't worry about the soap already. Don't worry I have paid the school fees!'…so it relieved all our mind, myself and the husband. … laughs
5	F.33	O's	When we make soap we sell and we are able to send our children to school Cooking oil - we process our sunflowers and use it in the homes and the surplus we sell. So we are able to send our children to school.
6	F.63	Std 4	Maiway…I can not explain how much it helps. Selling soap doing what to help my family. It is only now we are not able to go and get tallow. Even when you look at me I am different from other old women because of the club.
7	F.48	Std 6	We are getting income and selling our produce to support our families and we are able to send our children to school. **How much does it cost now for School fees.** Z$65,000 per term for secondary. **Can you earn that much from your vegetables?** Yes we sell beans. **How much would you sell per month?** We can get about Z$300 per week or more. ***(Interviewer to observer: We are not getting the full information)***
8	F.40	Gr.7	She said the club actually helped her in several ways. Especially when they got the cement they didn't look for a builder, they helped each other, with her husband to construct a toilet, then she also learned a lot about the prevention of diseases. Whenever they go to the toilet they have to wash their hands, also they have to have family cups also, they had to have various methods of preventing malaria like covering the stagnant waters around and also she has been taught about HIV AIDS so she doesn't have any problem with any diseases at all at her homestead. **So that what she means when she says work for herself, does she mean work for her family?** Yes.

9	F.54	JCE	The club helps me because I was taught so many things that helps me… how to grow vegetables, and so from growing vegetables that's how I get money.
10	F.44	Gr 7	The club helped us with the knowledge to keep our house clean and also to interact with others.
11	F.42	Gr 5	The club helps me to keep up standards as the family members and club members are expecting some high expectations from me so I am always up.
12	F.51	Std 4	The club helps me quite a lot. We have enough knowledge to prevent diseases also we can grow enough food in our gardens.
13	F.60	Std 2	It is the knowledge that I got from the health club that has helps me to improve the living hygiene standards in my family.
14	F.27	O's	The clubs have helped me to acquire knowledge to be able to care for my children is something that I like most. Now I am able to care for them. Also I am motivated to get an income by myself and help my husband which is needed in life. At this time he is only doing some soft jobs. Working at home and then he is not working. He is living with his younger brother.
15	F.72	Std 3	The clubs are so good, we learn a lot. That we should drink clean, uncontaminated water, a lot we learn from these clubs. **Do you know more than your mother?** Ah. Number one. I am much better than my mother. I used to be given left over food, even if I have not washed my hands, but now I cannot do that to my grandchildren. Children must wash their hands first before they get any food.
16	F.49	Gr. 3	The club has helped me to improve in this because I am always with others socialising. And through that way we create a lot of love and it has also helped to be self reliant. Especially before that, we didn't have any nutrition gardens and we didn't have toilets, now we have all those facilities through self reliance.
17	F.27	O's	When we are having our health sessions, we are taught about HIV/AIDS transmission also we learn about how to grow and prepare nutritious food. And with those lessons we are actually taught about life
18	F.70	Std 2	(Self discipline) The knowledge that I got from the club helped me…especially with the HIV/AIDS transmission.
19	F.34	ZJC	Not asked
20	F.35	O's	We have the knowledge on hygiene and there are projects that we are doing to give us an income.

ANNEX: 13.2.3. The Value of Reputation Section 9.1.2.3.

Are you considered to be knowledgeable in health and hygiene now?

1	M.50	O's	**If somebody asks you something do you know the answer?** I think I am quite able to answer.
2	F.50	Gde 7	Laughs... (being a nutrition co-ordinator) she is rated someone very high because of it.
3	F.58	Std 6	Not asked
4	F.44	RJC	Not asked
5	F.33	O's	Yes I am. My children look different. They are different from other people. Their practices are quite different.
6	F.63	Std 4	Yes she is known. She practices health and hygiene in her home and everywhere.
7	F.48	Std 6	She can not talk for herself, but the community she is working in knows that the health person is here and she has shown from her home and encouraged others to see her as an example and she has many followers.
8	F.40	Gr.7	She is regarded as knowledgeable and rich...just because I maintain my home smart but regardless of whatever, they still think I have all the things that everyone is buying in the shops
9	F.54	JCE	I am regarded as someone who is knowledgeable and have got something to help people with.
10	F.44	Gr 7	Yes they regard me as someone knowledgeable in the health clubs, but I wouldn't know what others think.
11	F.42	Gr 5	I am regarded as someone knowledgeable. Almost all the people from the surrounding villages decided to have oil processing at my homestead since it is a good looking homestead where good hygiene practices are done.
12	F.51	Std 4	Not asked
13	F.60	Std 2	Of course. When they see me they consider me to be a health and hygiene person and you can see physically and even at my home.
14	F.27	O's	They are saying that... *laughs shyly*
15	F.72	Std 3	People will point at me as a person who is an health extremist (perfectionist)
16	F.49	Gr. 3	Not asked
17	F.27	O's	Yes I am considered to be someone knowledgeable now that I am also considered at gatherings, and also people would want to hold their gatherings at my homestead because it is always kept clean.
18	F.70	Std 2	I wouldn't know what people think but as far as I know people regard me as someone sensible who knows what he is doing in terms of hygiene.
19	F.34	ZJC	They respect me, they say that because of my participation in these health activities they really respect me.
20	F.35	O's	missing

ANNEX: 13.2.4. The Value of Respect Section 9.1.2.4.

If you have gained respect is it important to you?

Degrees of Respect	#18	Phrases used
Highly respected	8	Use of 'very' important
Respected	3	'Unqualified' but important
Fairly respected	2	'Quite', less emphatic
Self respect	5	Self achievement, pride happiness
Not gained in respect	0	No mention of any respect

1	M.50	O's	Not asked
2	F.50	Gde 7	It is very important for her.
3	F.58	Std 6	Yes. It is important because I know that some people who know me also know I have something to do for them.
4	F.44	RJC	Very much. It is so important to me. Because whenever there is a big meeting, that can be called by counsellors, MPs or so on, they also have to call me. They have to tell me…'We have called you. This is taking place. There is a function'. This and this. And it shows also a respect to me. I feel I am somebody in the area. I am not dumped.
5	F.33	O's	Yes, it is my pride. That respect is a pride to me. That I have achieved something and my neighbours have given me the daughter in law who has joined the health club, so that is very good.
6	F.63	Std 4	I am so proud for the respect I am getting from my family and husband. You can come there. We are so pleased to see when you come to meet us, because you have lifted us from the mud.
7	F.48	Std 6	It becomes very…*(cowbells!)* sometimes but I am able to overthrow that.
8	F.40	Gr.7	I get quite a lot of respect from others. Because now everyone is busy doing her own things and nobody actually bothers about others business so there is quite a lot of respect amongst the community. **Before how was it then?** She is actually giving an example: like one could have a toilet and the other one wouldn't have a toilet and you could not allow any community member to come into your toilet and use it and also maybe if one is allowed to use the toilet the one other would go and inspect and see if that person has used it properly. Nowadays it is no longer happening that way, We know that even if someone gets into the toilet he knows how to use it.
9	F.54	JCE	I gained respect just from joining the club. Having respect is quite important because a lot of people will come and I will be giving advice, and before joining the health club this didn't happen.
10	F.44	Gr 7	I feel happy to gain respect as a member of the health club.
11	F.42	Gr 5	We gain a lot of respect as club members around our community since we are always encouraging those who are putting up new homesteads to build toilets before they build any other buildings.
12	F.51	Std 4	I feel very happy when I get such respect and I am always very happy.
13	F.60	Std 2	Of course. You feel very proud when you are respected by your family and thank God for that. That respect.
14	F.27	O's	It is so good
15	F.72	Std 3	Yes it is very important to me because I tell them I going to learn about health and hygiene and that's why they send their children to me.
16	F.49	Gr. 3	I think it is something very important because they are now considering the knowledge that we are imparting amongst the community.

17	F.27	O's	I think it is important to me because you are also considered to be someone knowledgeable. You are also considered to be someone at gatherings.
18	F.70	Std 2	It is very important to me as people now regard me as someone who is doing something sensible. Early days, people would laugh at as and ask us why we are wasting out time by going to set down under a tree, but now everyone wishes to be a health club member.
19	F.34	ZJC	All these activities that I am doing, weighing the children, advising the neighbours, even helping those that are sick, I am respected, I am an important person.
20	F.35	O's	It is very nice for me, I am very happy to be respected.

ANNEX: 13.2.5. Comparing rural and urban life Section 9.1.2.5.

Are you on the same level as a person in town?

Better	15	We are far much better here
Same	2	It is more or less the same
Worse	1	in town may be at a much better level than me

1	M.50	O's	It is more or less the same. Even better. Yes, because when you are out here you have a good environment unlike in town (with) air pollution; here we are quite free. You are taught in the health clubs to plant trees around and things like that. Shrubs around the place and you know that idea makes you feel quite energetic.
2	F.50	Gde 7	Not asked
3	F.58	Std 6	Yes I am in the same level because the last days I used to go and work in others fields, but these days I looking for others to work for me because I am getting some money to pay them.
4	F.44	RJC	But when we come to the really life. In town they have got ..what can I say… they are a bit … higher on us because they have got electricity and so forth whereas we just use fire. That is the only difference. But life. Really living, I think we are better. Like now I can work for myself. In town it is not easy to get a job. When I go to town I don't even get a cent from somewhere but here I can make money, from my garden, from my fields from selling this and that and I can get most of the food free, because I have ploughed. So I prefer being at my home than in town. .. laughs
5	F.33	O's	Ah! We are self reliant here. We process our cooking oil and whatever, while they are waiting to go and buy from somewhere. We don't do that. We are very independent here. Here is better.
6	F.63	Std 4	We are far much better here. We are able to work, to do it ourselves. Very empowered people. If it were not for the lack of rain we should be eating now groundnuts and relish and we would eat everything now. We have had nothing *(rain)* since the 1st January.
7	F.48	Std 6	Ah… I think we are far much better than people in town. This is what I think.
8	F.40	Gr.7	She thinks she is far much better than those in town.
9	F.54	JCE	I am far much better than someone in town. It is because I grow my own food and have my own land.
10	F.44	Gr 7	I am far much better than the people in town because in town people rely on spending money and here in the rural areas we have our own things.
11	F.42	Gr 5	I am far much better than the people in town because in town people rely on spending money and here in the rural areas we have our own things
12	F.51	Std 4	Not asked
13	F.60	Std 2	I am far much better than the townspeople. When they come and see me they will see how much I have changed. There is a tremendous change. So I can not compare myself. They are afraid of me. …laughs with total pride
14	F.27	O's	I can say we are better. Some of the people in town they don't have enough food. So in our area we are having enough food for our children. So I can dress them all and we are having bathing soaps. Some in town they don't have money for buying those things.
15	F.72	Std 3	Those who are practicing *(health practices)* are far much better than the town but if one doesn't practice it is not better.
16	F.49	Gr. 3	I think I am far much better off than anyone in town because I own my own home and I don't pay anything for owning that, and also my homestead is always kept clean so I think that maybe I could be at the

			same level or even a much better level.
17	F.27	O's	I think we are now at the same level since in town they have safe water and we also have safe water. They have clean toilets and we also have clean toilets. And also they have electricity and here we can also have solar electricity.
18	F.70	Std 2	I think someone in town may be at a much better level than me but I still feel that I can achieve more and maybe get to the same level as a person in town.
19	F.34	ZJC	We are far much better than in town.
20	F.35	O's	I think those people in town we have beaten then. We are far much better than in town. My husband is so happy when he comes home, he sees a great improvement.

How has your home or compound changed since joining the club?

Key

Hygiene Behaviour	20	Sweeping, potracks, plates, hygiene behaviour
Home improvement	14	Orchards, gardens, flowers, lawn, new rooms, asbestos roof
Self Efficacy	10	Husband/social respect, pride, time keeping, work ethic
Sanitation	10	New toilet, cat san, clean latrines
Self reliance	9	Income generation, supporting financially, selling/buying items
Water	8	Improved wells, covered water, ladle, own cups
Knowledge	6	Improved knowledge, understanding of disease, germ theory
[redacted]	5	Malaria, diarrhoea
Community	5	Community support, unity, togetherness
HIV/AIDs support	2	Use of herbs, caring, home remedies

1	M.50	O lev	Hm… there is quite a lot of changes there, because there is a lot of this awareness in hm.. health, let me call it what ?… well lets go to water and sanitation - where do we put it to combat diarrhoea and things like that. Then lets go onto things like AIDS awareness. Lets go to things like drugs - where you have some knowledge in things like medicine. What do you call it? hm… maybe the whole idea is that the health clubs are quite helpful in the sense that they keep you aware of : 1. Time because each time you want to do anything you think of time. Maybe you are always are late. 2. Maybe you respect some people when you join the health clubs. I can go on to say again that maybe you can go on to contribute to educating some other people in this world of civilisation. You can say lots and lots more about this one but I think it is important we have health clubs because then you have a lot to contribute in a society. *(help spread your knowledge)*
2	F.50	Gde 7	She is saying some of the hygiene changes she has embarked on are: she must make sure that her clothes are ironed before someone puts it on, and she should make sure that the blankets are washed after every month. One should eat in their own plate not sharing and one should have their own cup. In fact she is saying some will be surprised to be given their own plates whilst they are used to sharing but she will explain to them there is a possibility of them infecting one another, so they must have their food on their own plate. So she is saying at her home she has got a bucket which has got a lid. She puts their drinking water in there and closes the bucket for safety and everyone has got a cup at home and they have got a water ladle and each time one wants to take some water they will collect the ladle, fetch that water and put it in a cup and drinks it. She is giving an example. She didn't have a well at home and now she has her own and she can get safe water from it. In fact she is saying when were taught at health club that they should drink clean water. They had to find someone to dig that well and protect and now they are drinking clean water.
3	F.58	Std 6	I have changed. At first I was in difficult times until I joined the clubs and we were taught how to self realise. Then I started growing vegetables,

			meeting and from that time that I joined the projects there is a great sales. **What were your problems before the club?** In 1995 or 96 I was dumped by my husband. He left me with the children so I had to care for the children as I have 7 children and I educated them up to O levels, all of them and then after some of them went to work and they started to help me and so the things changed from that time. I had three huts built with poles, then when the children grew up we made bricks and then we started building with bricks. And when the children went to work they helped me. Now they have built a three roomed house . Yes, my home has changed. I had to build a brick house roofed with asbestos and we have got a drip kit, growing vegetables and irrigating them with this. My kitchen and even in the garden we know how to mix vegetables and herbs.
4	F.44	Fm 2 (RJC)	The clubs are helping because they participate. When I come to the club and tell them, 'Can we please do this and this to improve our project,' they do listen and they take part also what.....? They contribute for our club not to drop down. So that helps me in my work also. … It helps me a lot because as a club member also, when we make our projects we sell them out and when we get the money we share …I also get the share. For the share I can also pay school fees. I can also buy paraffin I can also buy soap, so it helps me a lot. And as a person…in your own mind…how does it help you develop in life? **It helps me because now I have no problem, I have nothing to think too much that except instead of just asking my husband, what to do next, I can just do it myself. Its also surprised him that I have got something from the club. *(I tell him)* 'Don't worry about the soap already. Don't worry I have paid the school fees!'…so it relieved all our mind, myself and the husband. … laughs**
5	F.33	O's	Very much. Even my children know that each one has his or her own cup
6	F.63	Std 4	In our village there are four, my husband has other women and I am only one who goes to the club. I am the first wife. The other wives are small, Form one, two and three.. I am very competent they cannot match with me. I have got a good garden and 13 mango trees, and a protected well and *(if I had)* a fence I would not have problems with wild animals. I have got bananas, sugar cane, but there are many snakes. It *(my compound)* has changed a lot because I used to throw rubbish all over the place, and I did nothing. I used to drink water from the river. Now I will not do that under any circumstances. I can go distances to fetch water. One time I went to Shabani when my sister died. You know they had this unprotected wells. They drank from the one where donkeys and animals were drinking and I got sick. For two days I was sick. So people there eat from one plate, the whole lot at a funeral. I couldn't do that. It was terrible.
7	F.48	Std 6	It has completely changed. A lot. I can see my home and my house and I am very proud about what I am now.
8	F.40	Gr.7	Toilets (1) Pot rack, refuse pit, protected water source, and also before joining the club she only had a kitchen and all of them could sleep in one room. Now they are taught that diseases could spread quite easily if people are crowded, so they had to build more and more houses, and now they have more space as bedrooms. Now we have got a four room house, one room for sitting, a kitchen, toilet … I have put in five more

			rooms to increase the space.
9	F.54	(JCE)	I didn't have a toilet and now I have one. Also I didn't used to have a refuse pit and now I always have one and now I also have my own protected water source. I also have a woodlot and fruit trees.
10	F.44	Gr 7	Yes I think there is an improvement in my homestead
11	F.42	Gr 5	Some changes at my house and compound. Before joining the club one couldn't walk freely in the bush *(without stepping on faeces)* but now we can walk freely in the bush because if one wants to 'go' in the bush one would use a hoe to cover the feaces. And also my children have learnt how to use a toilet.
12	F.51	Std 4	There are some changes here and there since I am still in the process of constructing my home stead. But I managed to construct a toilet and managed to increase accommodation for my family
13	F.60	Std 2	It has changed so much, four times. The way I think, my village, my house, it has changed a lot. Even my husband who I have in my house can see the big change. He is seeing now a woman who is able to look after her family. When I think of my parents who had not this knowledge that I have got now, I feel so sorry that they have lost something very important in their life.
14	F.27	O's	Yes. To pay some school fees for my children to have enough food for them, and their clothing and me and my husband so that we are having enough for us. **And hygiene?** All types of diseases. Like in Malaria covering the pot holes. Before we had malaria cases but now we are covering to prevent malaria. **Does it work?** Ah it does, the mosquitoes are less now? **Have you had malaria the last two years?** Ah no, no one in the family. **Do you have mosquito nets?** Ah no, we don't have mosquito we only use our own medicine, we burn cow dung and pine cones the whole night and the mosquitoes are chased away.
15	F.72	Std 3	Ah it has changed. Number one! I have planted my lawn, I have planted flowers and I maintain my house. I have got a toilet a well.
16	F.49	Gr. 3	My house and compound has improved greatly. I didn't have a toilet so I managed to construct one. Also I used to just throw away refuse in the field or in the yard and now I have a refuse pit. I also managed to put up a pot rack. I also every wet season I know I have to keep my yard clean by cutting all the grass around. Also disposing of all containers, which might contain stagnant water and so to prevent malaria.
17	F.27	O's	Before joining the club we didn't have a toilet and we didn't have a potrack. We just put out plates on the ground and probably could spend a whole week without sweeping the yard. How it has changed we now have a toilet We how have a pot rack. We know how to dry our plates and pots.
18	F.70	Std 2	There are a lot changes and these changes came about after joining the club. I didn't have a toilet, I didn't have a potrack. We didn't used to sweep our yard and now we do it almost everyday and the yard is always kept clean.
19	F.34	ZJC	Yes, It has changed. The diseases have reduced. The hygiene standards at my home have changed. Now we have these home remedies. We don't rush to the clinics, if there are people that are sick we treat them at home.
20	F.35	O	I have changed my home, I have now an orchard. I had no toilet now I

		levels	have a Blair toilett. I had no protected well, now I have my own well. I had a two roomed house now I have a four roomed house. **How did you do all that?** We learnt that we should help each other. We must work hard to get an income so you all can improve your home. (She sold vegetables)

What changes have you made to your compound with your own resources?

1	M.50	O's	Not asked
2	F.50	Gde 7	The protected family well as mentioned above.
3	F.58	Std 6	I always stay smart. My garden should also be smart…even the homestead and all the plates we use are family plates.
4	F.44	RJC	In my home… I can say, modifying the kitchen, even the out-looking if the yard, using the latrine, how to wash hands after using the toilet. It all improved my hygiene at home
5	F.33	O's	Yes, we have plenty. Maintaining the home, even if it is this rainy season we make sure we keep our environment clean, even if we are busy. It is a policy.
6	F.63	Std 4	Nutrition. I know what to eat and what not to. I know what my body needs. So all that. Netball has kept me fit. I can run!
7	F.48	Std 6	I have built my own toilet and my own protected well, all with my own money, and now I am anxious to build a bathing room. I have decorated my kitchen, I have brought plates and I have beautified it. Outside I have got a nutrition garden which is flourishing.
8	F.40	Gr.7	I actually managed to build my other four roomed house, my own bathroom, the other kitchen through my own ability and self reliance. **How long did it take you to do that building?** Two years time
9	F.54	JCE	Not asked
10	F.44	Gr 7	I have managed to build my own toilet and also a pot rack and a sink and also a nutrition garden and an orchard.
11	F.42	Gr 5	I have actually put up enough accommodation for my family and I have also a nutrition garden and also managed to buy enough cooking utensils for my home and also construction for my family and got assistance from the EHT.
12	F.51	Std 4	We managed to construct a toilet. My husband managed to put the roofing materials in. Me and my children we dug the pit. Although we got some of the cement from the health personnel. We actually brought some of the cement and managed to build another room for accommodation.
13	F.60	Std 2	I put up my own toilet. With my own resources and I got a protected well which I built myself. I constructed it. The nutrition garden around that well I have bananas and oranges and apples and mango and pawpaw. **When did she make the garden**? I had planted all that before but I did not quite know the nutrition value. Now I know. **When did she make the toilet?** I made this when I was in the club. The well I had done it before but not protected.
14	F.27	O's	*I put my own toilet*, borehole and protected well. Pot rack and I make my own compost. My own resources. *It is not a VIP, but just a covered* latrine. I have a nutrition garden.
15	F.72	Std 3	Yes, I got cement for the Blair toilet.

16	F.49	Gr. 3	I have managed dig and constructed my own family well, but at the moment it has dried up because of the drought. And also I have managed to construct another single blair toilet. **And that is without assistance from the project?** Yes.
17	F.27	O's	We managed to put up our own nutrition garden and also we constructed a family well and we always use the wood to make our own pot racks.
18	F.70	Std 2	I managed to buy more cooking utensils and also I had to put in a kitchen shelf in my kitchen and it looks nice. Also at that time I was able to be a builder and I helped others to build their own Blair toilets.
19	F.34	ZJC	I built my own toilet without outside help and put up an outside shower, and a family well and I have a nutrition garden, in fact two of them, and I grow vegetables, sweet potatoes and maize. I am sending my children to school **To built the toilet, how did she afford it?** From those sales.
20	F.35	O's	Not asked

ANNEX: 13.3.1. Changes in husband Section 9.1.3.1.

Has your relationship with your husband/wife changed?

Need	Change in Spouse		Ways spouse has changed
Affiliation	Supportive	8	New attitude, encourages, reminds her to go to the club, helps with chores, allowed to travel, encourages her to fulfil herself
	Respectful	4	Listens to wife, doesn't dominate wife, equal respect for her knowledge,
	Appreciative	3	Love and affection, is proud of wife, considered the best wife, pleasure of being at home
Achievement	Cognitive	4	Discusses with wife as intellectual equal, world wide global, new ideas, new people, debate, exposure
	Practical skills	6	Impressed by good hygiene practices, skills and abilities
Power	Role Model	1	Pleased to have a wife who is an example to others, admiration from others, status as club member
	Independent decisions	2	Acceptance of equal decision making, promoting gender, changing tradition, pleased by wife's independence and responsibility
	Financial independence	3	Pleased by financial contribution, easing load of supporting family, impressed by ability to earn
	Common unity	1	Meetings, share ideas

1	M.50	O's	There is quite a change. **Why?** Because now you can be able to sit down and discuss about *(things)*. You know some of the things not only within your catchment area but elsewhere and compare. Even world wide global. **You talk about some big issues?** Yes. **And before?** No, no, no! We never had such discussions. I think the health clubs came in to give us the light because we are used to meetings now. Unlike the meetings we normally have in the village whereby we talk about what we normally do there. The health clubs maybe you get new ideas from new people from elsewhere. You get friends, like some of the friends you bring for us down here and we introduce new things, like bee keeping ..hm.. like what? lots more. **So you are talking about outside people coming with fresh ideas. Is that what you like …** Not necessarily outside people coming in with new ideas but I would say it is helpful training with outside people because then you get new ideas which can contribute to what you have. **What about with your family, have you noticed anything?** Yes. I have noticed a lot of change. A lot of change. Because my wife now would be able to sit down ..er .. we are able to discuss. What I am trying to say is hm… I give her these gender issues I am talking about whereby we can also take a role of discussing about something and I listen and I don't argue. We actually debate on the thing. **So you don't mind now if she stands up to you and says I know better.** No I don't mind really. **And before you would mind that?** Yes because before it was cultural. **Traditional?** Yes. It was traditional. Some one would say 'Ah no, why develop the person like that!' But now I say 'ah no man. Look! We are

			promoting this gender issue and you have got to be unafraid to say whatever is promoting the family'. **Is she in the club?** She is part of the sewing club **So she did the health sessions with you?** She did
2	F.50	Gde 7	(her husband is the chief) laughs… she says the husband really considers her as the best wife
3	F.58	Std 6	Yes, it has changed. Because during the first time he couldn't allow me to go but these days he encourages me and he even says 'Are you not late?' and as for today he told me after breakfast he told me, 'You go to your thing'. **So he is helping you in the fields now?** Yes. **Was he helping you before?** No. never. And now even if I go to the workshops he allows me to go.
4	F.44	RJC	It has changed. Because my husband became also interested …. through *(me)* helping him, getting money, through improving of the home and the hygiene, I can say, he also became very interested.
5	F.33	O's	It was difficult at the beginning for me to come to the health sessions because my husband was not happy but after that when I came here and got the information and went back home and discuss with him and practised what I learnt and he developed to like it and now he is supporting me and he tells me 'You are late. You must run. You must go.' **In terms of respect for her how much has it changed?** I have gained more respect from him because now I make money from the sales and I support my family and he is quite happy about it.
6	F.63	Std 4	Ah…It has changed a lot. I have practised all what I have learnt and do what he likes so he is supporting me.
7	F.48	Std 6	My husband is so happy when I go to the health club because what I do is far much different from people who are not going to these activities.
8	F.40	Gr.7	My husband got to understand all what I talked to him about, after attending the club sessions. He didn't manage to join the club but he was very understanding and helpful.
9	F.54	JCE	N/a
10	F.44	Gr 7	N/a
11	F.42	Gr 5	I enjoy a very good relationship with my husband and children, and almost all the time they remind me that I am a member of the health club so I should show good examples.
12	F.51	Std 4	Laughs. Initially my husband would agree, but reluctantly. But as time went on, he enjoyed a good relationship. I remember one day he actually told me to go and join the others and he could go and get thatching grass. He actually brought me my shoes because I didn't have shoes at that moment.
13	F.60	Std 2	That man then started appreciating me because of my knowledge and my practices at home so the relationship became more. He respects her now. Laughs…
14	F.27	O's	He supported me even to say, 'Are you not going today. Is this not your day today?' because he saw the change, whenever I went, I came back home and practised it. So he liked it, he supported it.
15	F.72	Std 3	N/a
16	F.49	Gr. 3	There was a great improvement. Before I went to the club there were some things I couldn't do at home. Nowadays my husband will ask me. Where did you get this ideas from and I will tell him that I got it from the health club. **How does your husband compare the two places?**

			I think he likes home better than in town. Because at times he will stay a bit longer and he doesn't go back to work in time. And also to ask questions like, how did I do this and where did I get this type of tree. So he loves to be at home.
17	F.27	O's	N/a
18	F.70	Std 2	N/a
19	F.34	ZJC	In the beginning it was difficult. He was stopping me going to the club, and said 'Why are you wasting your time?' But now he supports me, and says 'Please go you are late!'
20	F.35	O's	The relationship has changed a lot, I can see the difference between the past and the present. *Laughing*. He is showing me his appreciation. I don't wait for him because he is away and I have to do the things on my own. And he appreciates this. He loves me.

ANNEX: 13.3.1. Changes in children Section 9.1.3.1.

Has the relationship with your children changed as a result of the club activities?

CHILD TO PARENT	#	CHANGES IN RELATIONSHIP
Practical	10	Practice hygiene in home, well trained
Affection	7	Happy children, more unity
Cognitive	5	Taught by mother, know why they must have good hygiene
Supportive	4	Children assist with chores, accept changes
Respect	3	Good, hardworking mother, knows what she is doing
Financial independence	3	Provide pocket money, school fees
Independent decisions	3	Children practice hygiene without being nagged, equality of boys and girls
Disease Reduction	1	Disease reduction, better survival

1	M.50	O's	Not asked
2	F.50	Gde 7	The children are very happy because they are taught by their mother and the mother will also monitor all their activities.
3	F.58	Std 6	They see me as a good mother, hardworking mother. Because sometimes they complain they have no money and I have to give them some, because I have it now.
4	F.44	RJC	My children. They have changed, because they became interested in the hygiene we are now using in the home. We used just to wash in the same dish. But because we introduced what we learnt in the health club, they became so interested in that. They have now also found it is so hygienic and they all like it.
5	F.33	O's	My children are quite happy the way we are. And I am able to give them some money for school fees and to buy the things they want.
6	F.63	Std 4	They are happy because they are seeing the change. They don't sleep before they bath. Each child has their own plate, cup…all those practices they are quite happy with them.
7	F.48	Std 6	My children have changed. They are now practicing health. Unlike before.
8	F.40	Gr.7	I am now staying with my boys. But they also had to learn to be hygienic. So much that every morning I don't have to tell them to start sweeping. Everyone know that they have to sweep, so that the compound stays clean. This is before they go to school. They also have to spread their bed and look for the broom and sweep the compound. **Is there any difference between the boys and girls.** They all do the same type of household chores.
9	F.54	JCE	It has improved in that *(before)* almost every time one or two children could be sick because malaria or diarrhoea diseases and the children are now so happy.
10	F.44	Gr 7	Not asked
11	F.42	Gr 5	Not asked
12	F.51	Std 4	I enjoy a good relationship with my children now that they can also enjoy good hygiene practices. Now they know that all drinking water should be cover. All plates should be put on a pot-rack and the pot-rack should be repaired if it is broken down in time. And also they can boil the water if it is not safe water for drinking.

13	F.60	Std 2	Ah my children really care for me now. They respect me as you see me. The children support me as a mother who knows what she is doing.
14	F.27	O's	I have realised it is very good to teach young children, so the hygiene practices with my children is not a problem. They are practising it.
15	F.72	Std 3	They know what I want. They know what health practices there should be. At times one will say 'Can I have food?' The other one would say, 'Have you washed. The grandmother wants you to wash before you have food'. So we understand what should be done.
16	F.49	Gr. 3	There was an improvement. When I first started training the children, they thought maybe I was just being a nuisance, but as time went on, each one could understand and even now, I try and remind them of the good hygienic practices. I have to remind them especially on the family cups and I sometimes quiz them and say, 'are you not now using a cup that doesn't belong to you' and they will quickly remember each has got to have his or her own cup.
17	F.27	O's	My children were very much interested in whatever changes I brought at home so I think there was an improvement in our relationship.
18	F.70	Std 2	There was an improvement since my children are now considering me someone knowledgeable in health and hygiene practices.
19	F.34	ZJC	They also participate. They help with the house, cleaning the yard and the toilet and all those places. Each one has got their own plate.
20	F.35	O's	You know my children are also participating in this thing. They are collecting flowers and plant them at home, and you see any fruit, they plant it. They participate in maintaining the yard and borehole. Each one has each plate and cup, they don't use the same one.

ANNEX: 13.3.3. Changes with in-laws Section 9.1.3.3.

How has your relationship with in-laws changed?

IN-LAWS	#	Indicators mentioned
Supportive	4	Encourages to go to CHC, help in fields
Respect	5	Doesn't gossip, clever, knowledgeable, constructive
Affection	2	Liked by in-laws, appreciate her caring, give her presents
Cognitive	3	Share CHC, share understanding, values
Practical	1	Share practices, hygiene behaviours
Survival	2	Cares for sick, survival of family
Independent decisions	2	Give her children to bring up, responsible mother, grandmother
Financial independence	1	A very good asset
Rejection	1	Jealous, critical

1	M.50	O's	N/a
2	F.50	Gde 7	She is saying the in-laws are now considering her as a very good asset at home because she has got the necessary knowledge and she is not a type of a wife who can just go around in the neighbours gossiping. She is quite responsible at home and she is quite knowledgeable. In fact she is saying she has cared for the relatives of her husband who were sick, two of them, and she was given a cow to thank her for the good work she has done.
3	F.58	Std 6	Not asked
4	F.44	RJC	My mother in law. She even joined the health club. She is also now in them. I am living with her .
5	F.33	O's	My in laws are quite happy. They have been here today to meet you, but they have gone now. They are very supportive because they now have a mother and a wife in the home who is useful and helpful and constructive.
6	F.63	Std 4	Not asked
7	F.48	Std 6	*(They think)* I am so high and rich and what? They are half - half. At times they change and they think I have a lot of money and I don't have . *(They seem not to be very happy. They are a bit jealous)*
8	F.40	Gr.7	In-laws also have got to understand that if I say I have to go to the clubs especially during the rainy season they didn't even bother with me. Other would say 'lets go to the field instead' so they are quite understanding.
9	F.54	JCE	N/a. They have all passed away
10	F.44	Gr 7	I enjoy a good relationship with my in laws because they are also health club members.
11	F.42	Gr 5	My mother in law also enjoys a very good relationship and she also enjoyed the health club issue but because she was too old she couldn't complete the sessions.
12	F.51	Std 4	My in-laws are also encouraging me to keep on going in the club. They are very happy about the health club activities.
13	F.60	Std 2	Because of that knowledge I developed to be come very associated with my in laws and my aunts. At times when they are sick I feel I must help them in my house and make sure I care for them the way I think they should be cared for. And when it is serious I make sure that they go to the hospital. I refer them to the hospital and they get treated because now

			they are respecting me very much.
14	F.27	O's	Not asked
15	F.72	Std 3	They are very happy with it. They tell me that the grandmother is having health practices. They know I will look after the children well and feed them well. Sure.
16	F.49	Gr. 3	I think they also followed suit, because most of time, they were also reminding the children not to leave the place untidy, they know that it is not allowed according to our hygienic practices. So as older people you could tell they were also interested.
17	F.27	O's	Not asked
18	F.70	Std 2	**Although my in-laws didn't join the club but they would consider me as someone knowledge and always used to encourage me to go and learn more and more. Especially they would remind me: 'Today is your meeting day. Are you not going to the club?' And I would be changing and start rushing to our meeting point.**
19	F.34	ZJC	Unfortunately I don't have any in laws, they have all died.
20	F.35	O's	They are very happy with me, they like me

ANNEX: 13.4.1. Disease prevention and cure Section 9.1.4.1.

<u>Has your family been protected/cured from sickness as a result of this club?</u>
The following were mentioned as examples of diseases that had been treated:

urine infections	#3,
stomach problems/ pain	#2, #3
wounds,	#3
rashes,	#3
burns,	#3
coughing,	#4, #9, #13
breathing difficulty/asthma	#5, #13
painful legs, feet	#10
genital sores	#4
headaches,	#12, #14, #15
flu	#12
diarrhoea	#4, #7
high blood pressure	#2.#3, #19
HIV/AIDS	#4

The following are said to have been prevented by good hygiene or blocking the transmission route:

Malaria	#2, #5, #8. #9, #14, #16, #18
Diarrhoea	#2, #5, #8, #10, #19
Mentally disturbed	#13
Bilharzia	#16
eye infections	#19

The following herbs were mentioned by name in connection with a cure that has been witnessed or actually effected by the respondent herself:

German Comfry	Hyper tension #2, genital sores #4, #5. #7, #9, painful legs#10
Wormwood	Diarrhoea # 2; stomach pains #2, #3
parsley	Urine infection #3
barbinella	Stomach problems #3, burns #3
artemisia	Stomach problems #3; coughing #4; diarrhoea #4 & #7, asthma #5
Garlic	genital sores #4
Thyme, comfry, & lavender	Diarrhoea, genital wounds #5, #9, flu and headaches #12, #14
Unspecified herbs	Terminally ill with AIDS #6,
Good nutrition	AIDS #6
Sweet Basil	unspecified #9
Herbs & honey	coughing #9
Rosemary	unspecified #14, #19
Mint	high blood pressure #19

Every respondent was able to affirm confidently that she had seen changes in the health status of her own family as a result of a combination of the main factors promoted in the health club which were:

knowledge of general hygiene
knowledge to prevent communicable disease
Good Facilities (toilet etc)
Good Practices
Good nutrition
Use of herbs for curing

ANNEX: 13.4.2. Application of Health Knowledge Section 9.1.4.2.

Has your knowledge/practice helped as much as you expected?

1	M.50	O's	Not asked
2	F.50	Gde 7	She was using the knowledge she has gained from the health club for caring for the two relatives of her husband. **What particular diseases can you cope with now?** Malaria, diarrhoea… **Do you know about curing with herbs?** Laughs… from the knowledge she has from herbs she is able to treat some minor ailments. **And has she found that this works well?** She is working as a care giver and it works well **Have you helped to cure diseases with herbs? Examples?** Someone who has got hyper tension she can use German comfrey leaves to treat that one and wormwood for diarrhoea and stomach pains. **Has your knowledge and good practice helped as much as you expected to improve the health of your family?** At first she thought the knowledge that she would acquire from the health club was just general knowledge which is not very useful for now but with time she is considering the knowledge is very important knowledge. **Is she making a difference between the hygiene and then the herbs, like before they learnt about general hygiene?** She saying about in general hygiene she is quite knowledgeable and even in herbal aspect she has quite a good knowledge of that.
3	F.58	Std 6	Like these boys when they come from work they just tell me they want to have every type of herb because they are helpful in their body. Like my husband he used to have continuous urine time after time and then I used parsley and it just stopped. Even stomach problems we use artimesia and wormwood. Then for wounds and rash we used barbinella and that little child of mine, they once played and the other one burned her, and they didn't tell me. When the burn was cured then she said she was always using barbinella. She is four. **Has your knowledge/practice helped as much as you expected?** Yes. It helped because this time even myself. I used to go for checks up for BP in Rusape, but now I am not going. It was very high because I used to go for check ups after two weeks and it was 180/100 sometimes 200/100+ and now it is 130/80. I just go to the clinic to be checked but it is OK.
4	F.44	RJC	Since I joined this club, to tell the truth, I haven't even come to clinic. Especially myself, my husband, my children… maybe one… the youngest one, who used to cough. But I used Artemisia. There is no more coughing in my house. No diarrhoea No what? It improved a lot. If you see my children, you can just see that this one is healthy. **So you know a lot about curing with herbs?** A lot. A lot… laughs… I am a herbalist now. Even a dying person can rise now and I give her herbs! **So you have helped to cure diseases with herbs? For an example?** I had an another boy, a young married man, who had HIV, I can say, because you can even see him and you can see this one has HIV and he had lumps and wounds somewhere here in the genital parts, like boils and they were discharging and smelling. We used German

			comfrey and garlic to drink and to put on the wounds. It has cleared off and he has gone back to work. **Had he come to the hospital first?** Yes, he went to the clinic here in the resettlement. He was taking his tablets but his wounds didn't heal. But when he was taking his tablets but we are also treating him with the comfrey and what.. in two weeks time he was OK. **So the tablets were also helping at the same time.** I think so, I think they were helping Exactly. It helped a lot. Like I have said.
5	F.33	O's	I know how to protect myself from malaria so I practice that, even diarrhoea. I know what to do to protect my family from these diseases. **Do you know about curing with herbs?** I do. **Have you helped to cure diseases with herbs? Examples?** I had a child called Sophia who had difficulties in breathing. *(Demonstrated Athsma attack)* . I used Artemesia. Then there was someone who was an HIV patient who was very sick and I used mixed herbs, thyme, comfrey, lavender and he got better. He had Diarrhoea and genital wounds, and mixing with the garlic and comfrey healed those wounds.
6	F.63	Std 4	I am only afraid of the HIV, but other diseases, I have a healthy family. **Do you know about curing with herbs?** I know about herbs because of coming here. I put the herbs in my tea, in porridge, maheu. **Have you helped to cure diseases with herbs? Examples?** I helped my child who was sick and made him to survive longer and it helped, although he died but it helped *(to make him comfortable)*. He was sick for a long time but he looked very healthy. Nutrition and herbs it helped.
7	F.48	Std 6	I know how to use herbs. **Have you helped to cure diseases with herbs? Examples?** There was a sick man in one of villages that I gave herbs. I am using herbs in my family, just to make tea. **What was the matter with the man?** Diarrhoea and things… I used German comfrey and Artemisia.
8	F.40	Gr.7	She doesn't have to visit the hospital to get treated for malaria or diarrhoeal diseases, because she never gets malaria. She prevents it and they also prevents all kind of diseases. **Has any of her family had malaria in the last 3 or 4 years.** Nothing! **And diarrhoea?** Nothing! **Do you know about curing with herbs?** I have heard about the herbs but I don't actually know their names but I have heard that they prevent or boost the immune system.
9	F.54	JCE	The knowledge I acquired helped to protect my family in that before that I didn't know how to prevent malaria. Now I know you have to cut the grass around. Also to build Blair toilets. **Do you know about curing with herbs?** I know about German comfrey, and lavender and sweet basil and all their cures. **Have you helped to cure diseases with herbs? Examples?** I have used the herbs to cure diseases and I had someone called

			Henry whom I actually gave several herbs with honey to stop his coughing and it actually helped. **Has your knowledge and good practice helped as much as you expected to improve the health of your family?** With the knowledge and practice that we have at the moment but people are all healthy at home.
10	F.44	Gr 7	It has actually helped in my family because now in my home and in my house is always kept tidy. **Have you helped to cure diseases with herbs? Examples?** Yes I have heard about herbs, and I have used German Comfry. A member had some painful legs and feet, and I advised her to use German Comfry by using the leaves with salt. And in the end it actually helped her and it got cured.**Has your knowledge and good practice helped as much as you expected to improve the health of your family?** Yes I think it helped so much . Now we know how to keep our water safe by covering out water and using protected water source and also using a ladle a water for taking drinking water. We also use a ladle for taking water from the container to a drinking cup.
11	F.42	Gr 5	I actually helped me quite a lot. For example, my children would share towels before the health club, and they would also share their cups and plates, and now each child has her or her own cup, plate and towels. **Do you know about curing with herbs?** I have heard about herbs and I have actually planted some in my garden. I now longer bother myself to go and get tablets if I get an illness. I use those herbs and I actually helped others to use those herbs and I advise others to go to the care givers to get herbs whenever they have some illnesses. **Has your knowledge and good practice helped as much as you expected to improve the health of your family?** It helped us quite a lot. Now we are also encouraging our husbands to come to the health clubs, although there are still some reluctant but they actually consider us a people who are knowledgeable about health.
12	F.51	Std 4	The knowledge we got can actually help to prevent several diseases especially like diarrhoeal diseases. These can actually be prevented and cured at home. **Do you know about curing with herbs?** I have heard about herbs and I have actually helped a member with lavendar who had flu and headaches. She actually got cured. **Has your knowledge and good practice helped as much as you expected to improve the health of your family?** I think it actually helped me since there is quite a contrast between the time we started and the time we are now.
13	F.60	Std 2	Ah this knowledge helped me, very, very much. All these sicknesses have reduced very, very much. This knowledge has helped me and I have practiced it and the results are reflected by the way my family surviving. **Which diseases particularly?** Coughs, asthma. One was mentally disturbed and he is better. Before this child used to cough too much, I think because of dust. I didn't clear up very much. But now because I do clear and then I clean my place. At

			times, 3,4 times she doesn't cough. **Really it was like this …(Demonstrated athsma attack) She agrees. Is it maybe because she is washing blankets or something.** Yes I did that and also keeping on warm clothes. If she was here I would show you that. **How old was she?** Seven. She is my grandchild. **And the one who is mentally disturbed, how did she treat that.** It is caring for him, keeping him clean, providing good food for him and so on and counselling. **How old was that person?** Six years. **How did she know he was mentally disturbed?** I think he is a slow learner, but when you look at him you don't know, but when he talks… **Do you know about curing with herbs?** Her son planted some herbs in the garden. **Have you helped to cure diseases with herbs? Examples?** She heard from him that they are very useful and they made tea and starting using them. **Has your knowledge and good practice helped as much as you expected to improve the health of your family?** Very much. That knowledge has helped me a lot within my family.
14	F.27	O's	Malaria (as mentioned above) **Do you know about curing with herbs?** I have brought rosemary and lavender. **Have you helped to cure diseases with herbs? Examples?** When my head is aching I use lavender and my pain stops. Has your knowledge and good practice helped as much as you expected to improve the health of your family? The knowledge of hygiene practices helped me and my family as I expected.
15	F.72	Std 3	Yes I have improved my nutrition because I do grow myself, not buy. Now I am able to teach my family and advise others to join the clubs. (other questions not asked
16	F.49	Gr. 3	The knowledge I got has been very helpful. Because before my children would always get bilharzia because they are playing stagnant water, and until I got that knowledge, I have managed to teach them not to play in stagnant water and they don't get water now. Also where I get water for my garden, I have put in a platform out of stones so that I don't get into the stagnant water. **Did you get this from the training?** Yes I actually saw that picture during training and I copied it . **What about curing with herbs.** Yes I have heard about it but I have not actually done it. **Has your knowledge/practice helped as much as you expected?** Now that we have the knowledge and good practice in our home we have reduced the number of illnesses in our family. Like at my home malaria cases have actually gone down. Only one child got malaria last

			year.
17	F.27	O's	The knowledge we got has helped us in so many ways. We now save money. We no longer have to go to hospital to be treated for diarrhoeal diseases. We now have the toilets. People are now using toilets unlike before when people had to go in the bush. **Do you know about curing with herbs.** We have heard about herbs but we haven't actually used them. **Has your knowledge helped as much as you expected to improve the health.** **Now that we know to prevent a number of these diseases we can now stay happily and healthily with our families and this is because we have got a lot of knowledge and our EHT actually encouraged us to practice these health and hygiene practices.**
18	F.70	Std 2	Before joining the club I used to get problems with malaria every year. Now there is quite some change. Now I have gone for four years without any malaria incident at my house. **Do you know about curing with herbs?** I have just heard about herbs. I haven't used them for anything. But I am also a traditional midwife… As a midwife I regard the club actually added on the improvement of our hygienic practices, especially when we are helping the pregnant mothers **Has your knowledge/practice helped as much as you expected?** I think it helped a lot and looking at a person of my age, I don't get any illnesses and that also helped my family quite a lot as I might be someone who could not even go and weed in the fields.
19	F.34	ZJC	This education has helped me a lot. My children used to have diarrhoea each time but now I am practicing health and hygiene that I was taught in this clubs this has disappeared. Even with sore eyes, that is now a talk of the past. **Do you know how to cure with herbs?** I do know. I have helped so many of those within the clubs and outside the clubs. I helped someone who had a headache and I gave her rosemary to chew. And I helped someone outside the club, who had high blood pressure and I gave her mint, even a mint plant to plant in her garden and she says she is feeling better.
20	F.35	O's	Not asked

knowledge of general hygiene #2, #12, #13, #14, #16, #19
knowledge to prevent disease #2, #3, #4, #5, #6, #7, #8, #9, #10, #11, #12, #13, #14, #15, #16, #18, #19
Good Facilities (toilet etc)
Good Practices #9, #10, #11
Good nutrition #6, #15
Use of herbs for curing #2, #3, #4, #5, #6, #7, #9, #10, #11, #12, #13, #14, #19
Not used herbs #16, #17, #18
Question not asked: #1, #20

ANNEX: 13.4.3. HIV/AIDS involvement Section 9.1.4.3.

Do you know about, or are you involved in the AIDS Carer Programme?

Key

Heard not involved	9	Aware of activities in the club, not directly involved
Care giver	5	Actively involved in Caring for sick
Herbal knowledge	3	Mention of herbal cures
Receive Treatment	3	Recipient of AIDS Carer programme
Nutrition	3	Mention of nutrition
Trainer	3	Trainer of Carers or on committees
Orphan care	2	Actively involved in care of orphans
Not heard	0	Unaware of AIDS Carer programme

#	Age	Educ	Response
1	M.50	O 's	I am not directly involved, but the carers have been to almost every home
2	F.50	Gde 7	She is doing that. I work with the care givers to seek care and I go to the hospital every Wednesday at the clinic. (with Linkage)
3	F.58	Std 6	I am a trainer, I train how to care for the sick and train the carers how to handle the clients. We grow herbs, and teach how to use the herbs to the clients. Also teach how to dry the herbs and make them in powder form. **Where do you get the vegetables?** In the nutrition gardens. So you train in nutrition as well? Yes
4	F.44	Fm 2 (RJC)	I am much involved in that because I trained Care-givers under this ward. After training Care-givers, we distributed *(them)* in the whole ward again. So all those caregivers will be caring each one in her own village. So during the month we had to make one monthly meeting with the care givers, each one reporting what is taking place in her village or I have to go round the villages visiting the carers, even visiting the sick. So that is how I am involved. And I also work with the WAAC *(Ward Aids Co-ordinating Committee, a government programme)*. They have something to do with the sick again, HIV people. So whenever they gain reports from the HIV people, they have to come to me again. **And how is the Care giving? Is it helping do you find?** Very much. The Caregivers are doing very much in terms of herbs I can say. That's what they are much helping people with. They are trying to use different herbs to the careers and reducing *(poor)* nutrition. They have to tell them what kind of food to give to what kind of a person of the sick… so that's what they do.
5	F.33	O's	I am a care giver. 2 Bedbounds. 4 Housebounds. 63 sick (HIV active). 3 orphans
6	F.63	Std 4	The care givers are involved and I know about them. They are promoting nutrition and they have introduced herbs, which they are using for the sick and their families. We know very well about these diseases, and about herbs as well.
7	F.48	Std 6	There are so many Care givers in our area for illness people and I also go there. The care givers report to the Club and then the club members visit the sick.
8	F.40	Gr.7	She was also involved in Aids Caring but not as a carer but just the

			awareness. She didn't need any help from the carers in her family.
9	F.54	(JCE)	Care giver, started in 2002. I wasn't trained. I am just a volunteer I have 6 patients.
10	F.44	Gr 7	Yes. I am involved in Aids caring
11	F.42	Gr 5	I am involved in care giving activities on caring for the AIDS patients. I am a member of the top committee in those activities.
12	F.51	Std 4	I also work with the care givers but I am more of a foster parent of orphans
13	F.60	Std 2	We have got them, one in each village.
14	F.27	O's	There are many care givers in our club. In every village there is two or more.
15	F.72	Std 3	Yes my club knows about the care giving.
16	F.49	Gr. 3	She had just heard about the carers but she is not involved.
17	F.27	O's	We have care givers in our club but I am not a care giver.
18	F.70	Std 2	I am involved in the HIV/Aids but I am not a carer. I am with the orphans… looking after the orphans. Helping them to play, interact and trying to get food for them. I take turns with the orphans on a daily basis.
19	F.34	ZJC	I am a care giver.
20	F.35	O levels	We have caregivers. We chose them to follow up the sick in our villages and make sure they have good nutrition and teach the families of the sick how to care for them.

ANNEX: 13.5.1.Changes in friends/neighbours Section 9.1.5.1.

How has your relationship with friends /neighbours changed?

Degree of Association	#14	Phrases used
Jealousy	1	Want to see someone suffering, pull her down
Respect/ harmony	2	Don't join but accept differences
Curious	2	What to know what is happening, show interest
Imitation	4	Copy practices, emulate CHC members
Influenced to join	8	Share ideas, persuade to join, promote change
All joined	8	Most neighbours are already in club
Speak same language	1	Understand each other/ common unity

1	M.50	O's	Not asked
2	F.50	Gde 7	Not asked
3	F.58	Std 6	Yes. It has changed. Some are happy but some are not happy. Because in our African custom some one will just want to see someone suffering and then if your life changes some are not happy about it.*
4	F.44	RJC	They are all members. They have all joined. Very interesting. Yes, they have all joined.
5	F.33	O's	I shared with them my experience: why people should have toilets, pot racks, refuse pits, and they have accepted the idea and they have put up all those things and we are staying in harmony.
6	F.63	Std 4	My neighbours are saying 'How can we go to school with our children and grandchildren'. *(i.e. Embarrassed to learn with younger people, destroys their dignity)* They are too old to do that. But we live together well. They show an interest, but even if you come there you will see the difference between them and my house. I don't stay in a house like theirs. I know about mosquitoes to protect myself.
7	F.48	Std 6	Not asked
8	F.40	Gr.7	My neighbour is also a club member so I don't have any problem with neighbours and she is also my friend.
9	F.54	JCE	There is quite an improvement with my relationship with the neighbours as some of them are actually copying what I do at my home since I have learnt quite a lot from the clubs.
10	F.44	Gr 7	Also my neighbours are in the club so we enjoy a good relationship
11	F.42	Gr 5	All my neighbours are health club members so we enjoy a very good relationship. One of my best friends who I used to attend with passed away but with everyone around I enjoy a very good relationship.
12	F.51	Std 4	Our neighbours are quite understanding but although they didn't join in the club, they didn't have the facilities like toilets to prevent diseases, like club members do. But they are now trying to copy the ideas and they are talking to the village health workers so they can also get such facilities.
13	F.60	Std 2	Not asked
14	F.27	O's	Not asked
15	F.72	Std 3	Not asked
16	F.49	Gr. 3	I think our neighbours also give us a lot of respect, especially at funerals. Once we have a funeral around, they always call the health

			club nearest to them to do the catering.
17	F.27	O's	A lot of my friends they came to join the other health clubs groups. And also the one that didn't join started to copy what ever I was doing to improve my compound
18	F.70	Std 2	My friendship with my neighbours has improved as most of them have joined the club also.
19	F.34	ZJC	They are saying, 'What are doing at your health club. You must invite us.' So I invited her and now she is in the club.
20	F.35	O's	We are both in the club, so we share ideas and speak the same language.

* *In fact there has been a lot of problems in that Mrs Toririo is thought by many to be high jacking many of the benefits of the clubs for her own gain, and there is considerable break down of unity as many are accusing her of nepotism, in that her children have been selected for the paper making and the project has been damaged as a result. She is involved in every project as well as training others but the ward is less co-ordinated that others as she spend more time on her own income generation than encouraging others and whilst she has imparted her skills across the district, she is not a natural leader.*

ANNEX: 13.5.1. Difference with non-memers Section 9.1.5.1.

Are Health Club Members different from non members?

KEY	#16	Non members difference to members
Some difference	16	Identified differences
uninformed	5	No health knowledge
Not hygienic	3	Compounds dirty, use dirty water
Poor Imitation	3	Copy without understanding reasons
Less united	2	not united, quarrel a lot
Disinterested	2	Not concerned about health club
Not smart	1	Poorly dressed, not smart
Disorganised	1	Less maintenance in home
Idle gossip	1	waste time gossiping, idle, speak different language and interests
More disease	1	Suffer more disease
illiterate	1	Fear / embarrassed to join as illiterate

1	M.50	O's	Not asked
2	F.50	Gde 7	Not asked
3	F.58	Std 6	Not asked
4	F.44	RJC	They are so different. Even if there is a funeral in this village. If you have to go there and you just watch you will find out this one is different from that. It is just because the one from the health club is dressed well and is smart. Even if you go back to their home you just see a very big difference. Those in the health clubs they have improved and some others they are trying to copy but it is different from the one who did the lessons. **Is it still the same even though you are not meeting so often now. Do people still maintain that difference? Are they are aware that they have moved to a different stage? Do they feel they are better than they were before?** Yes. They really feel that. They are also encouraging those that didn't come.*(saying)* 'Please may you also come'. So we have a big number now who are coming for more lessons. **And all those little practices that you did as health club members, are people still doing them, or maybe they are going down a little bit now that they are not being reminded the whole time? Like washing hands with soap, or covering your water or having a ladle…Are they still doing that?** Okay … they are still doing that. They are even improving. We used to have those 20 litre tins covered with a little hole, but now they have brought even bigger buckets with a lid. Even if you enter their kitchens they will have cups in a line, each child knows…'that's my cup, that's my cup', and they have to use their own one. **People wouldn't believe it if I told them that.** Ah yes, it is being done
5	F.33	O's	There is a big difference between those who come to learn here, because when they go back they practice. That one that doesn't know. How can one change when one doesn't know anything? So there is a difference.
6	F.63	Std 4	Ah… they are very different… a long distance between them. The

			club members are far ahead.
7	F.48	Std 6	Those who are outside the health clubs do not bother. They do not understand why they should build toilets. Why should they have protected water supply, why should they keep their place clean. So they don't understand; so it is something that disturbs those who are practicing this hygiene standard.
8	F.40	Gr.7	If I visit a friends home who is not a club member, sometimes their compounds are dirty and also the business we discuss, member and non member it is quite very different. ***In what way?*** A non club member would discuss anything to do…maybe it could be gossiping and the like, but a club member would discuss maybe health issues and project issues.
9	F.54	JCE	There is a big difference in that non members always don't even mind to have clean water and diseases affecting them. They have very little knowledge on health issues.
10	F.44	Gr 7	Club members regard the health club as a good thing whilst the non club members are not even concerned about the health clubs.
11	F.42	Gr 5	There is a difference since a non club member would not even replace a broken down pot rack. One would take quite a long time before replacing it. But as a club member we share experiences with each other, and if we encourage each other no one would get annoyed but would take the idea as a very good idea.
12	F.51	Std 4	Non club members wouldn't understand our language when we start talking about health issues whilst club members understand each other very well.
13	F.60	Std 2	There is a difference between a Club member and a non club member. Because with club members the same languages, the same objectives and we are united, compared to people outside the health clubs.
14	F.27	O's	The hygiene is needed. Some of them do not understand.
15	F.72	Std 3	There is a difference. Because we tell them we are going. So they always say we will also follow you and we shall join the clubs as well.
16	F.49	Gr. 3	There is a difference because members will actually practice what they have learnt in the clubs. Whereas the non members will try and copy but probably their families wont actually practice them.
17	F.27	O's	Club members would practice good health practice and this is witnessed by their clean homesteads, whilst the non members although they would try and copy they wouldn't actually practice as club members do
18	F.70	Std 2	It could be anywhere, it could be at gatherings or funerals. You can tell the difference between non members and club members because the club members both physically and mentally. Non members have got quite a lot of misunderstanding amongst them and they spend quite a lot of their time quarrelling but for us club members we are always doing something constructive.
19	F.34	ZJC	Not asked
20	F.35	O's	You know those who are not in the clubs, the difference is that they are not interested to join the health clubs. And some fear, because they cannot read and write and they think it is a school where you have to read and write. So they have fears.

ANNEX: 13.5.1. Friendship with non-members Section 9.1.5.1.

Is there a difference between your friendship with members and non members?

KEY	#13	Phases used
Difference	11	Objectives different; don't speak same language
No difference	2	We don't show the difference, in same area

1	M.50	O's	Not asked
2	F.50	Gde 7	Not asked
3	F.58	Std 6	Not asked
4	F.44	RJC	No. When we meet. We don't show like that… I am a club member and you are not in the club. No there is no difference. We only show we are club members when we are at the club, but when we meet at the church or where… ah no, we don't show…
5	F.33	O's	There is a difference because a member will have the same objective and when we discuss it is in the language that we understand each other, compared to a non member. So there is that difference.
6	F.63	Std 4	*(Birds of the same feather flock together).* When you are friends with a thief, you end up thieving. You don't speak the same language as those who are outside the clubs. Our objectives are very different. What we admire, what we appreciate and what we are doing. When one is not joining the family one doesn't treat it as important. That's where the difference is although we stay together, but it is the objective that is different. When I come here to Mr Hayisa and the club members I am taught things that are constructive, that protects my family and me, so we are not the same *(as non club members)*
7	F.48	Std 6	Although we draw them near, close to us, but it is very different the way I deal with a club member because we speak the same language, the same objectives, compared to someone who is not a club member. That is the difference.
8	F.40	Gr.7	Not asked
9	F.54	JCE	The friendship is very different in that when discussing non club members find it very difficult to understand especially when you talk about health issues.
10	F.44	Gr 7	Not asked
11	F.42	Gr 5	Not asked
12	F.51	Std 4	Even those who are none club members we would assist them in times of need, but it is not like club members.
13	F.60	Std 2	Not asked
14	F.27	O's	It is different yes. Because these people do not practice hygiene. So we speak different languages.
15	F.72	Std 3	Not asked
16	F.49	Gr. 3	There is a difference, in that also non club members, some of them, wouldn't appreciate what we are trying to teach others. And also when we are gathered we share quite a lot of ideas on health issues, but those who don't appreciate may regard us a people that want to know everything and yet we will be trying to impart knowledge to others.
17	F.27	O's	Since we come from the same area my relationship or friendship with members or non members is the same.
18	F.70	Std 2	I have a different type of friendship. Normally when you visit a club members homestead, you get ideas. Whilst if you visit a friend who is not a club member you need to impart all your knowledge but at times they don't accept that.

19	F.34	ZJC	We have more time with those who come to the club.
20	F.35	O's	Yes. Of course there is a difference, because with the members we speak the same language, so we have time to go and meet, so those who are outside we don't see so much except at the funerals. They always say they are too busy and yet they cant maintain their homes as we do.

ANNEX: 13.5.4. Social Support Section 9.1.5.4.

Do you help each other outside club activities?

Categories		Ways of helping each other
Share knowledge	1	Expertise growing herbs,
Help cure the sick	4	Give herbs, carers for terminally ill, home remedies, refer
Share travel costs	2	Source goods in town, save bus fares, drought power
Support the sick	9	Visit to help practically; chores, firewood, weeding
Funeral costs	9	Contribute in cash or kind,
Hunger / trouble	3	Contribute food or money, clothes
Burden of work	1	Assist in home
Savings club	2	Contribute each week for one member

1	M.50	O's	Not asked
2	F.50	Gde 7	Not asked
3	F.58	Std 6	I help them by telling them what is good. They must use even these herbs. I tell them how they are helpful and even encourage them to grow the herbs and some I give them free so that they join the activity.
4	F.44	RJC	**We help each other a lot. Like what I have said, that we can do buying and selling at home, they can help the neighbours when one is going to town, 'Please may you also buy my 2kg sugar, or 10 kg sugar because I want to sell'. Instead of wasting bus fare for all of them, only one will go. If one becomes sick one will tell the other, 'I am not feeling well, but this has to be done, this wants to be done.' And one will go there and do the work, the job, so that's how we just help each other.**
5	F.33	O's	There is money that we contribute when one of our members dies. And when anyone is in trouble as a group we make sure we support and provide in terms of money or whatever the members needs, we do support each other.
6	F.63	Std 4	Yes, we receive money. Like if we have if have a funeral in this village, if she is our member, we contribute towards the funeral. We raise the money compared to the type. No we are contributing $15 each. As club members we have chosen care givers to support the sick in the village and we as club members we also visit the sick.
7	F.48	Std 6	When someone has a heavy burden of work we as a group as health club members will go to the house. Whether it is weeding or what we will always put it up and help each other.
8	F.40	Gr.7	They are helping each other by sort of having a saving club. There are fifteen members contributing 3,000 each and every Friday they have to give a certain member that money.
9	F.54	JCE	We are contributing money and have formed a saving club
10	F.44	Gr 7	As club members we help each other in different ways. For example if a club member falls ill other members will go there and fetch firewood or help by weeding in the fields.
11	F.42	Gr 5	We help each other in several ways. Say in times of funerals, we actually collect maize using a five litre tin, for measuring. Every member would contribute a 5 litre of maize and also a bundle of vegetables from our nutrition garden. And also if a member falls sick we always help by tilling the land and weeding in the field. And we also share draught power if one doesn't have power for tilling the land.
12	F.51	Std 4	We would contribute in cash and kind towards a club member in times of

			need and if one of the members falls ill we would go and try and assist in various ways.
13	F.60	Std 2	Of course we unite together when someone has a funeral, we donate money and in terms of food we really support each other.
14	F.27	O's	Our care givers that are elected care for the sick in the village no matter whether one is in the club or not.
15	F.72	Std 3	Very much. Number one. We visit each other when one is sick. When there is a funeral we contribute building, vegetables, money and even firewood. When one is sick we till the field.
16	F.49	Gr. 3	We help each other in different ways. In times of funeral we contribute in cash or kind towards helping one of our members, and in times of hunger we also contribute food, towards those who do not have enough and also help each other in terms of encouraging people to visit the hospital when they are sick.
17	F.27	O's	Say if a member of the club falls sick we all go and help her out, maybe weeding, cooking, washing clothes, and maybe contribute in cash or kind towards her treatment.
18	F.70	Std 2	We help each other in several ways. That is if one falls sick, we always go there and contribute in cash or kind. We do the same at funerals. Besides helping each other as club members. Other clubs are also contributing towards a funeral of a member of another club. So I see that as something very helpful.
19	F.34	ZJC	In the club, they have appointed care givers who follow up with those who are sick in the village despite that they are not club members. They follow up and assist families and when there is a funeral they contribute mealie meal, vegetables…
20	F.35	O's	When there is a funeral we all contribute mealie meal, vegetable, money to that person. For the sick, the club caregivers visit the sick. If there is a desperate family she appeals to the club members to contribute what they can.

ANNEX: 13.5.4. Reasons for not joining Section 9.1.5.4.

Why do you think some people didn't join the clubs?

Not mobilised	6	don't know the aims and objectives of the clubs; ignored by project; were not informed
Protectionist	1	Members discourage others to protect own interest
Forbiden by Husband	4	Husbands jealous, don't understand clubs
Not interested	4	No wish to improve themselves
Not resident fulltime	1	Live part of the year in town
lazyness	2	Too difficult, too far to walk
No time	2	Too busy

1	M.50	O's	There are so many who have not joined the clubs. Maybe they don't know the aims and objectives of the clubs. They still want more education from us. Yes **Any other reasons? Why don't they come when they see everyone gathering?** Maybe they think it is for these people and we don't allow them here. And maybe what should I say, there is a disease or what? But, I think some of us, when we are in a project like we are having here we want some other people to come in and that bars some other people from outside to know what is happening. **So you try to protect your club from outsiders... you don't want too many people coming in?** Because then the whole idea was if one can join the health clubs you are not allowed to participate from what is happening there. So it keeps everyone away from this thing. **And if they join the health clubs can they come at any time or is it only blocked after the beginning when they join? You cant join again afterwards or what?** No they can still come in. **So if you started a health clubs again now you can still carry on?** Ya. No problems really. So it doesn't really stop people from coming in but its just maybe the attitude of some people thinking it is not for us. Yes that what I am trying to say. That is maybe for these only and we are not allowed to have. But suppose one goes in or maybe door to door and discuss with people and try and explain the idea of ZimAHEAD and the health clubs themselves that we are trying to promote life in this sphere. Maybe honestly you would get a good response. You would be surprised. Even more people than we have in the clubs right now.
2	F.50	Gde 7	Not asked
3	F.58	Std 6	Some didn't join because they didn't have the full knowledge and some they were just ignored, and some their husbands didn't allow them to go but they have got the feeling of wanting to go to the clubs. **Why didn't their husbands want them to go?**

			They just don't understand it. **Are they worried that their wives are too free, just to go out?** I don't know, some are just jealous of the wife going out. **Were they worried that the wife was just going after the EHT?** Laughs… they think maybe the EHT will take their wives.
4	F.44	RJC	Not asked
5	F.33	O's	Before there was rumour that Hayisa is proposing to our women and so on, so the men were refusing their wives to go, but we never stopped and we had to continue. **Were there ever any problems with the EHT?** No, it was just a rumour.
6	F.63	Std 4	They have …..no love, self esteem, they don't even think about it. .. no wish to improve themselves.
7	F.48	Std 6	Not asked
8	F.40	Gr.7	There is quite a lot of awareness in their village so practically everyone joined but a few people didn't join just because some were in towns and not resident in their homes.
9	F.54	JCE	**Some would lack the interest to form the club and some were stopped by their husbands from joining.**
10	F.44	Gr 7	When the health clubs started some members didn't think it was something that could help them in the future so they didn't join.
11	F.42	Gr 5	Not asked
12	F.51	Std 4	Initially some didn't join because they were not interested but as time went one some went to join a savings group
13	F.60	Std 2	I think it is laziness. You know we would really like everyone to join and come and acquire this knowledge but I think some people are just to lazy to come and participate in this.
14	F.27	O's	Some people did not exactly know why we were going for lessons. They didn't know what was happening there and so on.
15	F.72	Std 3	They thought it was difficult. Imagine, going to school, walking to school so they thought it was very difficult.
16	F.49	Gr. 3	Some did not join because they were stopped by their husbands. While some just lacked the interest whilst their husbands were encouraging them to join. We also have quite a number of men who have come forward to join but they are no longer attending their lessons but the have those membership cards.
17	F.27	O's	Some didn't join because they didn't get the awareness or collect the information. And some because they didn't want to do away with their household work. They thought they would do away with quite a lot of the time if they came to the club.
18	F.70	Std 2	Some people didn't join the club because they lacked the interest and some wanted to see what was going to happen but we are the earliest to join, other joined later groups as they realised it was something good to be in the club.
19	F.34	ZJC	Some because they don't know, and just remain at home and they are too busy to join
20	F.35	O's	They don't know what they will benefit from these clubs.

ANNEX 12.1: Observation List for Household Survey , Makoni District (2001)

Number	Variable Name	Observation	Values
1	Sex	Sex of respondent	1= male; 2 = female.
2.	Age	Age of respondent if known	#
3.	Marital status	Are you married?	1= never; 2 = married; 3 = divorced; 4 = widowed.
4.	Household Head	Who takes most major decisions on a daily basis?	1 respondent, 2 = spouse.
5	Number	How many people share the same kitchen?	#
6.	Source Income	Who provides your main income?	1 = self; 2 = spouse; 3 = both; 4 = children; 5 = donation
7.	Income Amount	Can you give some estimate of monthly cash income?	#
8.	Membership	Are you a member of a CHC?	1 = member; 2 = non member
9.	Qualified	Have you finished your sessions, and if so when?	1 = < 6mths; 2 = < 1 year, 3 = over a year; 4 = not finished yet
10	Number Sessions	How many sessions have you attended (see card)	1 = 0-4 sessions; 2 = 5-12 sessions; 3 = 13-20 sessions; 4 = 21 - 30 sessions; 5 = non finished yet
11.	Religion	Do you have any religious affiliation?	1 = Christian; 2 = apostolic; 3 = traditional; 4 = other
12.	Education	How many years did you remain in school?	1 = < 2yrs; 2 = 2 - 4 years; 3 = primary; 4 = <2yrs secondary; 5 = ZJC; 6 = 2-4 yrs; 7 = 'O's; 8 = 'A's.
13.	Rubbish pit	Observe if there is a rubbish pit	1 = yes; 2 = no.
14.	Sitting of pit	Is the pit well sited	1 = yes; 2 = no.
15.	Management of pit	Is the pit well managed?	1 = yes; 2 = no.
16.	Yard	Is the yard well swept?	1 = waste in pit; 2 waste in dumps.
17.	Defecation	Any sign of child's faeces in yard?	1 = yes; 2 = no.
18.	Pot rack	Is there a pot rack in yard?	1 = temporary; 2 = permanent, 3 = none, 4 = other
19.	Handwashing	Is there any handwashing facility?	1 = temporary; 2 = permanent, 3 = none, 4 = broken
20.	Use of HWF	Are the signs HWF is in use?	1 = water in tank; 2 = none; 3 = wet ground, 4 = dry, 5 = none
21.	Use of soap	Is there any sign of soap near HWF?	1 = yes; 2 = no soap; 3 =ash in use.
22.	Method hand wash	After visiting latrine, wash hands, observe method	1 = bowl method; 2 = pouring method; 3 = both
23.	Ladle	Evidence of ladle near water storage	1 = yes; 2 = no.
24.	Use of ladle	Ask for a drink of water and observe method	1 = use of ladle/cup; 2 = no use of ladle
25	Water storage	Observe how water is stored	1 = partly covered; 2 well fitting cover; 3 = no cover.
26	Cover type	Observe type of cover for water container	1 = wooden cover; 2 = metal cover; 3 = plastic; 4 = cloth; 5 = other type.
27	Cups	Ask child which is their cup	1= yes, it is known; 2 = not known.
28	Plates	Observe how food is served	1 = individual plates; 2 common plates
29	Veg plot	Observe if there is a Veg garden for family	1 = veg. garden; 2 = no veg. garden
30	Garden	Observe is veg garden is fenced and how	1 = wire fencing; 2 = branches; 3 = trunks; 4 = sisal; 5= euphorbia; 6 = other; 7 = other
31	Trees	Observe number of types of fruit trees	#
32	Sanitation	Ask to use the toilet and observe type	1 = open defecation; 2 = cat san; 3= temp structure; 4 = permanent structure.
33	Blair latrine	If BVIP find out when constructed	1 = <6 mths; 2 = 6mths- 1 yr; 3 = >1yr; 4 = not yet; 5 = in construction
34	Water source	Where is drinking water obtained from?	1 = Blair handpump; 2 = bushpump; 3 = bucketpump; 4 = open well; 5 protected well; 6 = dam; 7 = rain; 8 = unprotected spring; 9 = protected spring; 10 =river; 11 = stream; 12 = rain harvest; 13 = rock catch
35	Cement	Have you received cement?	1 = yes; 2 = no.
36	When supplied	When was the cement supplied?	1 = < 6mths; 2 = 6mths - 1 yr; 3 = 1 - 6 years; 4 = not yet; 5 = >7yrs
37	Purpose	What was the cement meant for?	1 = lining pit; 2 = superstructure; 3 = well; 4 = not received;5 = Hand washing facility
38	Member IG	Are you a part of any IG group?	1 = yes; 2 = no.

39	Child waste	Any signs of child defecation in yard ?	1 = yes; 2 = no.
40	Adult waste	Any sign of open defecation in surrounding bush?	1 = yes; 2 = no.
41	Chicken waste	Any signs of chicken droppings in yard?	1 = yes; 2 = no.
42	Dog waste	Any sign of dog faeces in yard?	1 = yes; 2 = no.
43	Goat waste	Any sign of goat droppings in yard?	1 = yes; 2 = no.
44	Cow waste	Any sign of cattle faeces in yard	1 = yes; 2 = no.
45	ORS know	Ask for demonstratration how to make ORS	1 = good knowledge; 2 = poor knowledge; 3 = partial knowledge
46	Diarrohea know	Show diarrhoea pics and ask for explanation	1 = good knowledge; 2 = poor knowledge; 3 = partial knowledge
47	Malaria	Show Malaria pics and ask for explanation	1 = good knowledge; 2 = poor knowledge; 3 = partial knowledge
48	Bilharzia	Show bilharzia pics and ask for explanation	1 = good knowledge; 2 = poor knowledge; 3 = partial knowledge
49	Worms know	Show worms pics and ask for explanation	1 = good knowledge; 2 = poor knowledge; 3 = partial knowledge
50	Skin know	Show skin Disease pics and ask for explanation	1 = good knowledge; 2 = poor knowledge; 3 = partial knowledge
51	AIDs know	Ask about HIV/AIDs	1 = good knowledge; 2 = poor knowledge; 3 = partial knowledge
52	TB know	Ask about TB	1 = good knowledge; 2 = poor knowledge; 3 = partial knowledge
53	Child care	Ask to see Child Growth card ;ask about immunisation	1 = good knowledge; 2 = poor knowledge; 3 = partial knowledge
54	Mos nets	Any use of mosquito nets	1 = none; 2 = adults only; 3 = children only; 4 = both adult and children
55	Food produce1	Any processing of peanut butter	1 = yes; 2 = no; 3 = not found/maybe
56	Food produce2	Any processing of mealie meal	1 = yes; 2 = no; 3 = not found/maybe
57	Food produce3	Any processing of oil	1 = yes; 2 = no; 3 = not found/maybe
58	Food produce4	Any processing of vegetables	1 = yes; 2 = no; 3 = not found/maybe
59	Food produce5	Any processing of honey	1 = yes; 2 = no; 3 = not found/maybe
60	Food produce6	Any processing of other food	1 = yes; 2 = no; 3 = not found/maybe
61	Food produce7	No processing at all	1 = no processing of anything; 2 = some processing
62	Food stored 1	Any storage of maize	1 = adequate; 2 inadequate; 3 = n/a
63	Food stored 2	Any storage of dried veg.	1 = adequate; 2 inadequate; 3 = n/a
64	Food stored 3	Any storage of beans/ soya	1 = adequate; 2 inadequate; 3 = n/a
65	Food stored 4	Any storage of meat / biltong	1 = adequate; 2 inadequate; 3 = n/a
66	Food stored 5	Any storage of dried insects	1 = adequate; 2 inadequate; 3 = n/a
67	Food stored 6	Any storage of dried fish	1 = adequate; 2 inadequate; 3 = n/a
68	Food stored 7	Any storage of other food	1 = adequate; 2 inadequate; 3 = n/a
69	Club	Record name of Health club if applicable	Code for each club
70	Village	Name of Village	Code for each village
71	Ward	Name of Ward	Code for each ward
72	District	Name of district	1 = Makoni; 2 = Gutu; 3 = Tsolotsho
73	Year	Year data collected	#
74	Date	Day and month data collected	#
75	State of latrine	Observe state of latrine	1 =maintained; 2 = poor repair
76	Use of latrine	Record use of latrine	1 = used; 2 = not used;
80	Cleanliness latrine	Record cleanliness of latrine	1 = clean, 2 = dirty (faeces)

ANNEX 12.2: Questions for Semi-Structured Interviews, Makoni District (2004)

Annex Number	Annex Title	Question Number	Question asked	# respondents
13.1.	Name and sex	Q.1.	Name of Respondent and Sex	20
13.1.	Age	Q.2	What is your age? 20	20
13.1.	Level of education	Q.3	What level of Education have you reached?	20
13.1.	Position in club	Q.4	What is your position in the Club?	20
13.1.	Name of the club	Q.5	What is the name of your Club?	20
13.1.	Year of joining	Q.6	In what year did you join the health club?	20
13.1.	Number of health education sessions done	Q.7	How many health sessions have you completed. When completed?	20
13.1.	Income Generation	Q.8	Are you involved in any Income generation (IG) activities?	20
13.1.	Adult Literacy	Q.9	Do you know about or are you involved in Adult Literacy?	20
13.4.3.	HIV/AIDS involvement	Q.10	Do you know about or are you involved in AIDs Carers programme?	20
13.1	Miscellaneous activities	Q.11	Are you part of any other activities within the health club?	20
13.1.	Number of children living at home	Q.12	How many children are you caring for at your home?	20
13.1.	Spouse present full-time	Q.13	Is your Husband/wife present at home full time?	20
13.2.2.	Main value for self	Q.14	What is most important in your life as a woman?	20
13.2.1.	Self Improvement	Q.15.	How does the club help you to achieve this?	19
13.1.3.	Attraction of the clubs	Q.16.	What do you enjoy best about the club?	20
13.1.1.	Reasons for joining clubs	Q.17.	What were your reasons for joining the club?	17
13.2.6	Self reliance	Q.18.	Has your house/compound changed since joining the club?	20
13.2.5.	Comparing rural and urban life	Q.19.	Are you now on the same level as a person in town?	18
13.1.2.	Reasons for attendance at Sessions	Q.20.	Why did you attend so many health sessions?	19
13.3.1.	Changes in husband	Q.21	How has your relationship with husband changed?	15
13.3.2.	Changes in children	Q.22	How has your relationship with children changed?	17
13.3.3.	Changes with in-laws	Q.23.	How has your relationship with in-laws changed?	13
13.5.1.	Changes with friends/neighbours	Q.24.	How has your relationship with neighbours changed	15
13.2.4.	Value of respect	Q.25	If you have gained respect is it important to you?	19
13.5.1.	Differences with non-members	Q.26	Is there a difference between members and non members?	16

ANNEX 12.2: Questions for semi-structured interviews, Makoni District (2004) Continued

13.5.2.	Type of friendship	Q.27 Q.28.	Do you have many friends who are not in the club? Do you have a different kind of friendship with club members and non members?	13
13.1.8.	Sustainability of club	Q.29.	How often do you meet as a group?	18
13.5.3.	Social Support	Q.30.	Do you help each other outside club activities?	18
13.5.4.	Reasons for not joining	Q.31.	Why do you think some people didn't join the clubs?	16
13.1.7.	Recommendation of health club	Q.32.	In recommending the club to other people what would you tell them?	18.
13.17.	Success in recommending club	Q.33	How many people have you persuaded to join the club?	18
13.2.3.	Value of reputation	Q.34	Are you now considered to be a knowledgeable person in HH?	15
13.4.1.	Application of health knowledge	Q.35	Has your family been protected from sickness as a result of this club?	18
13.4.2.		Q.36	Has your knowledge/practice helped as much as you expected to improve the health of your family?	18
13.2.2.	Knowledge and experience of herbal cures	Q.37. Q.38.	Do you know about curing with herbs? Have you helped to cure with herbs? Examples?	17
13.2.6.	Self reliance	Q39.	What hygiene changes have you made with your own resources?	17
13.1.5.	Expectations of health club	Q.40.	Have your expectations been met/disappointed?	17
13.1.4.	Perception of gain from health club	Q.41.	Have you benefited more from knowledge or inputs?	16
13.1.6.	Future commitment to health club	Q.42.	Will you continue in the club?	17
13.1.6.		Q.43.	Why is it worth staying with/leaving the club?	17
13.1.9.	Voluntary statements	Q.44.	Is there anything you would like to add?	15

Annex 14.1: Reported cases of infectious disease in Makoni District: 1995-2003

MALARIA

(Source: Ministry and Health District Report, 2004)

Ward	Health Centre/ Hospital	1995	1996	1997	1998	1999	2000	2001	2002	2003	Total #	Average p.a
Tanda	St Michaels Hos*	2292	5879	n/r	n/r	3579	4050	7557	6028	5202	34587	4,941
Weya	Weya Hospital*	1432	2554	n/r	n/r	2279	3065	2998	2093	3735	18156	2,593
Mutanda 1	Chikobvore H/C	245	793	858	1351	388	520	629	439	403	5626	625
Dumbamwe	Dumbamwe H/C	133	186	164	237	89	118	146	184	192	1449	161
Inyati Mine	Era mine H/C	135	110	386	614	374	170	87	190	325	2391	265
Chiduku	Matsika H/C	282	320	543	682	909	217	267	392	261	3873	430
Dumbamwe	Nyahukwe H/C	268	596	873	651	392	219	94	472	254	3819	424
Nyamidzi	Nyamidzi H/C	308	863	1502	1191	920	808	951	1454	532	8529	947
Ruombwe	Toriro H/C	318	488	597	548	220	246	243	119	315	3094	343
Tikwiri	Tsanzaguru H/C	617	906	787	814	507	453	166	724	812	5786	642
	Total H/C cases	3,738	12,695	5,710	6,088	9,657	9,866	13,138	12,095	12,031	87,310	1,137

KEY

	Period of health promotion in Community Health Club Intervention	200 less than previous year	* District Hospitals not Health Centres

Annex 14.2: Reported cases of infectious disease in Makoni District: 1995-2003 (Continued)

DIARRHOEA

(Source: Ministry and Health District Report, 2004)

Ward	Health Centres	1995	1996	1997	1998	1999	2000	2001	2002	2003	Total #	Average p.a.
Tanda	St Michaels Hosp	270	376	n/r	n/r	454	331	345	574	528	2878	411
Weya	Weya Hospital	219	222	n/r	n/r	170	208	189	242	448	1698	142
Mutanda 3	Chikobvore H/C	180	231	71	85	119	127	122	82	135	1152	128
Dumbamwe	Dumbamwe H/C	144	141	119	138	92	103	66	118	143	1064	118
Inyati Mine	Era Mine H/C	144	170	259	189	106	63	34	82	75	1122	124
Chiduku	Matsika H/C	182	148	182	204	346	89	74	94	76	1395	155
Dumbamwe	Nyahukwe H/C	105	163	256	200	259	293	101	221	149	1747	194
Nyamidzi	Nyamidzi H/C	325	338	162	181	79	56	50	117	125	1433	159
Ruombwe	Toriro H/C	404	301	244	198	166	81	65	26	38	1523	169
Tikwiri	Tsanzaguru H/C	303	248	266	210	191	210	56	348	427	2259	251
	Total H/C cases	1787	1740	1559	1405	1358	1022	568	1088	1168	11695	1299

Annex 14.3: Reported cases of infectious disease in Makoni District: 1995-2003 (Continued)

SKIN DISEASES

(Source: Ministry and Health District Report, 2004)

WARD	H/Centre / Hospital	1995	1996	1997	1998	1999	2000	2001	2002	2003	Total #	Average p.a.
Tanda	St Michaels Hospital*	520	961	n/r	n/r	923	890	1516	819	810	6439	919
Weya	Weya Hospital*	427	396	n/r	n/r	388	372	321	297	680	2881	411
Mutanda 1	Chikobvore H/C	395	425	399	314	430	509	469	227	333	3501	389
Dumbamwe	Dumbamwe H/C	620	722	579	629	470	252	151	216	336	3975	441
Inyati Mine	Era mine H/C	318	181	253	290	217	102	82	61	69	1573	174
Chiduku	Matsika H/C	466	402	753	543	542	399	380	296	451	4232	470
Dumbamwe	Nyahukwe H/C	327	491	720	498	935	650	177	242	124	4164	462
Nyamidzi	Nyamidzi H/C	676	965	711	812	671	407	241	239	208	4930	547
Ruombwe	Toriro H/C	685	1204	874	526	364	155	67	90	41	4006	445
Tikwiri	Tsanzaguru H/C	664	968	1017	726	775	368	74	279	346	5217	579
	Total Cases	**5098**	**6715**	**5306**	**4338**	**5715**	**4104**	**3478**	**2766**	**3398**	**40918**	**484**

Annex 14.4: Reported cases of infectious disease in Makoni District: 1995-2003 (Continued)

DISEASES OF THE EYE

(Source: Ministry and Health District Report, 2004)

Ward	H/Centre / Hospital*.	1995	1996	1997	1998	1999	2000	2001	2002	2003	Total #	Average p.a.
Tanda	St Michaels Hospital	240	290	n/r	n/r	179	201	405	292	276	1883	269
Weya	Weya Hospital*	184	282	n/r	n/r	259	261	239	181	313	1719	245
Mutanda 3	Chikobvore H/C	105	134	95	145	242	212	180	71	259	1443	160
Dumbamwe	Dumbamwe H/C	227	346	324	374	231	184	138	108	205	2137	237
Inyati Mine	Era Mine H/C	166	175	177	197	85	20	30	8	18	876	97
Chiduku	Matsika H/C	169	140	130	196	141	142	137	96	137	1288	143
Dumbamwe	Nyahukwe H/C	n/a	491	172	154	152	128	24	60	38	1219	135
Nyamidzi	Nyamidzi H/C	227	268	290	436	153	138	82	60	36	1690	187
Ruombwe	Toriro H/C	264	277	237	256	124	72	62	87	38	1417	157
Tikwiri	Tsanzaguru H/C	203	266	141	180	166	106	20	77	102	1261	140
	Total Cases	**1,361**	**2,097**	**1,566**	**1938**	**1,294**	**1,002**	**673**	**567**	**833**	**11,331**	**177**

Annex 14.5: Reported cases of infectious disease in Makoni District: 1995-2003 (Continued)

SHISTOSOMIASIS (Bilharzia)

(Source: Ministry and Health District Report, 2004)

WARDS	Pre-Intervention	Period of Health Promotion Training						Post intervention period		
	1995	1996	1997	1998	1999	2000	2001	2002	2003	TOTAL
Ruombwe	1310	924	630	673	178	43	45	26	1	3830
Nyamidzi	842	543	464	370	57	38	39	118	26	2497
Tikwiri	234	325	231	133	45	27	7	32	47	1081
Dumbabmwe	83	88	80	58	48	30	24	9	0	420
Chiduku	386	270	313	341	156	158	240	117	199	2180
Inyati		55	72	93	30	1	0	0	97	348
Totals	2855	2205	1790	1668	514	297	355	302	370	10356

By 1999 there were 42 Health Centres throughout the 20 communal wards of Makoni, of which 12 had resident Environment Health Technicians. A communal ward consisted of five or six scattered villages and between one and two thousand households, mostly subsistence farmers (See Annex 1 for population of wards).

Whilst the Health Centres cater only to the local population of up to 3,000 people (usually within 10kms), the district hospitals are referral centres for all the surrounding health centres, often over 50kms away. It is surmised from the statistics above, that the this is the reason why the district hospitals show little decrease as they do not measure only the local Community Health Clubs as many of the patients come from non Health Club areas. Most Health Centres registered some downward trend in diarrhoea, skin and eye diseases, ARIs, and Shistosomiasis (See Annex 13). Malaria also decreased significantly in seven wards during the intervention period, whilst increasing steadily in the Weya and Tanda District Hospitals from 1999.

In Makoni District, ARIs diminished in seven out of the ten wards where Health Centre statistics of reported cases have been collected from Ministry of Health reports (Waterkeyn,2005). Overall the number of ARI cases fell from 17,677 in 1995 to 12,676 in 2003 (See Annex.13). Only in the two hospitals did the numbers increase in this nine year period. Most wards experienced peaks particularly in 1999, when the total for cases seen in the ten areas was 18,029. In Ruombwe Ward, where the intervention first started in 1995, the number of ARI's reported has fallen consistently from 2,136 in 1995 to 159 cases reported in 2003.

The clinical statistics of reported cases of Malaria in ten Health Centres in Makoni District shows an steady increase of malaria between 1995 and 2004. Total number of cases rose from 3,738 in 1995 to 12,031 in 2003. In each of the three years between 2001 and 2003, there are over 5,000 reported cases in Tanda Hospital each year as opposed to 2,292 in 1995; in Weya Hospital there were over 3,000 as opposed to 1,432 nine years previous (See Annex. 13). In 2003, despite the rising number of cases in the hospitals, five Health Centres have lower annual rates for 2003 than the average for nine years. Seven wards showed an immediate dip in number of cases in the first year of intervention, four of these continued a downward trend in the second year, and three continued in the year the intervention finished, before starting the rise the following year (See Annex 13).

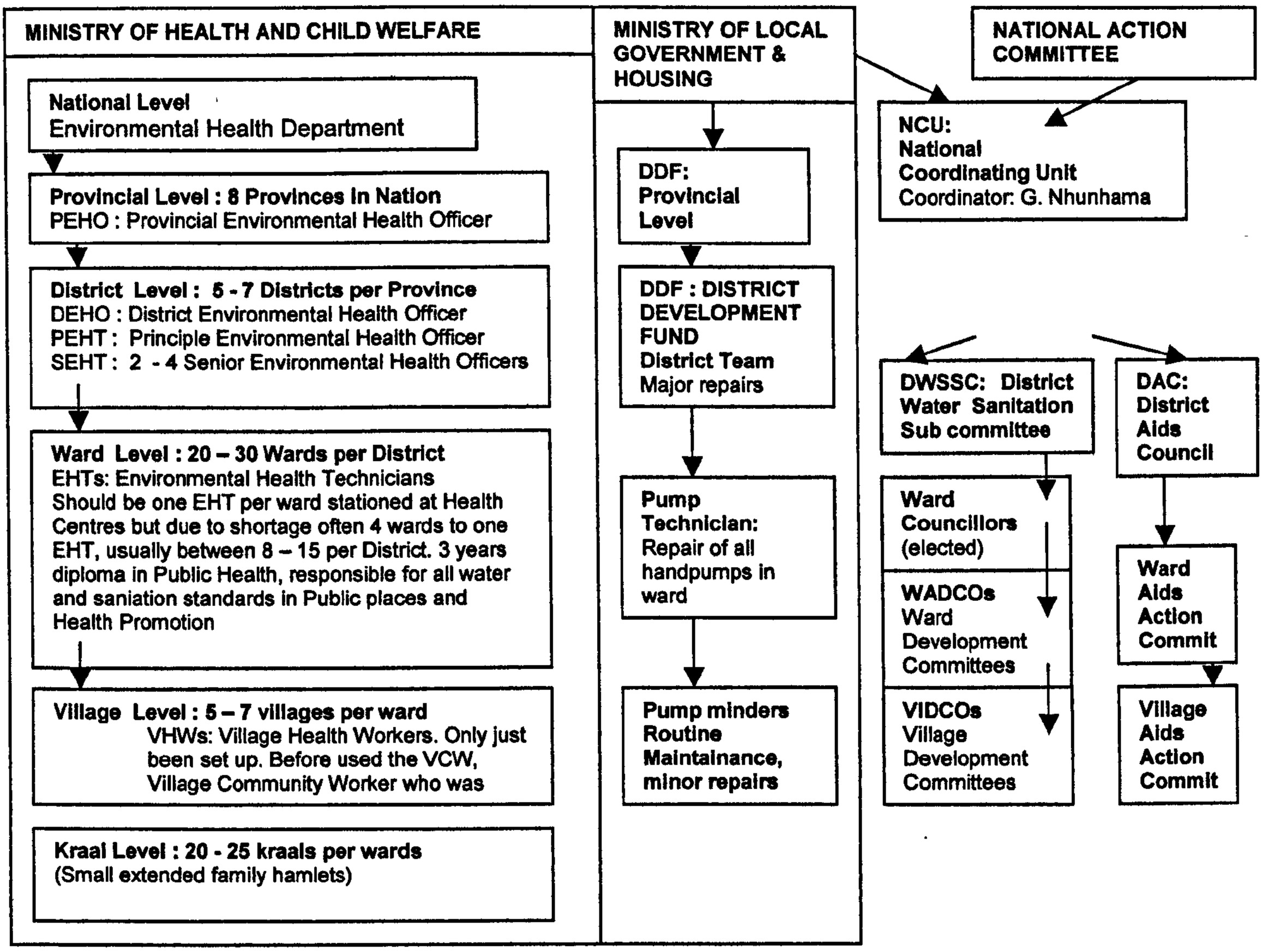
Reported cases for the eight sampled Health Centres in Makoni District, reflect the national statistics (Table. 11.) downward trend each year. In 1995 there were 5,098 cases which slowly decreased in seven years to a low of 2,766, in 2002, before climbing again to 3,398 the following year. Looking at each ward individually, we find that seven out of eight Health Centres show substantially fewer cases of skin disease in 2000, compared to the previous year, 1999, when most health promotion was being done. Of the seven wards, five wards maintain the downward trend for a further year to 2003. Data for the next two years is needed to understand this pattern more fully. Ruombwe ward has (as with diarrhoea) a well-established pattern diminishing every year from a high of 1204 in 1996 to only 41 reported cases in 2003. Tikwiri showed the biggest decrease in one year from 368 reported cases in 2000, to 74 in 2001. All eight Health Centres, and one of the hospitals show that reported cases for skin disease in 2003 are lower than the mean number of cases per year for nine years.

As at national level, the two referral hospitals in Makoni District recorded no decrease in cases of eye disease between 1996 and 2003. However the Health Centres in each ward, show a decrease from a high of 2,097 reported cases in 1996, to 833 cases in 2003. The pattern is similar to other diseases mentioned above: In 1999 there are seven wards with a significant decrease in one year, and of these all maintain or decrease numbers of case in the following year from a total of 1,294 in 1999 to 1,002 in 2000. The number of cases continues to fall to 673 in 2001 and reaches a low of 567 in 2002 before rising to 833 in 2003 (See Annex. 13).

In ten Health Centres in Makoni District, reported cases of diarrhoea (Ministry of Health/ Waterkeyn 2005) reveal that in the eight wards sampled, the number of reported cases of diarrhoea dropped significantly the year that health promotion was started. Wards vary as to when Health Clubs were started, (See Annex.1 and Annex. 23) but with more analysis the year that health may correlate with the decrease in reported cases. Preliminary data shows that for example:, reported cases of diarrhoea in Nyamidzi fell from 338 in 1996, to 162 cases in 1997; in Dumbabmwe from 138 reported cases in 1998 to 92 cases in 1999; in Inyati from 106 cases in 1999 to 63 in 2000; and Chiduku from 346 to 89 reported cases. The year 2001 was the second year of the Health Promotion Intervention under revision in this thesis, during which time over 2,000 latrines were constructed as well as regular health promotion in most wards; in this year the total number of cases in ten wards (including the two with district hospitals) decreased from 1,022 in 1999 to 568 in one year, climbing back immediately 1,088 in 2001, and rising slightly each year after that. Ruombwe provides the exception to the pattern. This ward had initially had the highest rate of reported case in the sampled wards with 404 cases in 1996. In the first year of intervention there was an immediate drop to 301 in 1997, with a further decrease to 266 in 1997. this strong downward trend continued each year until the low of 568 was reached in 2001 (six years after the first health clubs started). However instead of rising again as in other wards, the number of cases continues to decrease to 28 in 2002 and 38 in 2003 (See Annex 13).

In Makoni District, the decline in the number of reported cases of bilharzia has been evident in all the six health centres. In the first year of intervention Ruombwe ward decreased in reported bilharzias cases from 1310 to 924, and continued to decrease annually to only one case seen in 2003. Nyamidzdi fell from 543 to twenty six seen cases in five years. Inyati only had one case in the three years between 2000 and 2002. On the other hand Chiduku having reduced from 386 to 117 in eight years has increased to 199 in 2003.

ANNEX 15: Zimbabwe Government Structure



ANNEX 16:

CATALOGUE OF VISUAL AIDS
FOR PROMOTING HEALTH IN RURAL COMMUNITIES:
Participatory Training Material
for use by field staff
in Water and Sanitation Programmes
in Central and Southern Africa

Developed by J. Waterkeyn
Illustrated by Bulelwa Madekurozwa, Willliam Kandiero, Kuda Mukurumure, Juliet Waterkeyn

Produced by ZIMBABWE A.H.E.A.D ORGANISATION (1999)

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Creating demand for sanitation and hygiene through Community Health Clubs: A cost-effective intervention in two districts in Zimbabwe

Juliet Waterkeyn, Sandy Cairncross*

London School of Hygiene & Tropical Medicine, Keppel Street, London WC1E 7HT, UK

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Abstract

Unless strategies are found to galvanise rural communities and create a demand for sanitation, we cannot achieve the United Nations Millennium Development Goal of halving the 2.4 billion people without sanitation by the year 2015. This study describes an innovative methodology used in Zimbabwe—Community Health Clubs—which significantly changed hygiene behaviour and built rural demand for sanitation. In 1 year in Makoni District, 1244 health promotion sessions were held by 14 trainers, costing an average of US$0.21 per beneficiary and involving 11,450 club members (68,700 beneficiaries). In Tsholotsho District, 2105 members participated in 182 sessions held by three trainers which cost US$ 0.55 for each of the 12,630 beneficiaries. Within 2 years, 2400 latrines had been built in Makoni, and in Tsholotsho latrine coverage rose to 43% contrasted to 2% in the control area, with 1200 latrines being built in 18 months. Although Zimbabwe has historically relied on subsidies to stimulate sanitation, this intervention shows how total sanitation could be achievable. The remaining 57% of club members without latrines in Tsholotsho all practised faecal burial, a method previously unknown to them. Club members' hygiene was significantly different ($p<0.0001$) from a control group across 17 key hygiene practices including hand washing, showing that if a strong community structure is developed and the norms of a community are altered, sanitation and hygiene behaviour are likely to improve. This methodology could be scaled up to contribute to ambitious global targets.

Keywords: Hygiene; Sanitation; Promotion; Women; Behaviour; Zimbabwe

Introduction

Every 15 s a child dies from diseases largely due to poor water, sanitation and hygiene (WHO, 2000). An authoritative review (Esrey, Potash, Roberts, & Shiff, 1991) found that sanitation can lower the rate of diarrhoeal diseases by 35% and good home hygiene by 33%, and that these two interventions alone are more effective in reducing diarrhoea than improvements in either water quantity (20%) or water quality (15%). One of the Millennium Development Goals (United Nations, 2002) is to halve, by the year 2015, the number of people who have no sanitation (currently 2.4 billion people, or two fifths of the world's population). This immense task relies not only on substantially scaling-up available funds (Terry & Calaguas, 2003) and using effective technologies, but also on the capacity of the unserved population to respond to this international effort.

*Corresponding author. Tel.: +44 20 7927 2211; fax: +44 20 7636 7843.

E-mail addresses: juliet.waterkeyn@lshtm.ac.uk, julietwaterkeyn@yahoo.com (J. Waterkeyn), sandy.cairncross@lshtm.ac.uk (S. Cairncross).

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Whilst there is seldom resistance to improving water facilities in the rural areas of developing countries, there is usually less interest in making hygiene improvements and to date sanitation initiatives have attracted little support. It is clear that this demand can only be created if a more subtle strategy is used to persuade the target population of the benefits of safe faecal disposal. Sanitation coverage in sub-Saharan Africa has not kept pace with population increase, but has dropped from 60% in 1990, to 47% in 2000; in Asia it has fared little better (Cairncross, 2003). This trend needs to be reversed by creating a *demand* for sanitation. For this to happen, a proven model for community mobilisation is required that can be rapidly adopted and taken to scale. We document the effectiveness and costs of one such approach, which has been successfully implemented by government staff in two districts of Zimbabwe.

Participatory approaches in Southern Africa

Participatory approaches were first used in the water sector in the 1980s as a means of community mobilisation (Srinavasan, 1990). By the mid-nineties, the local variant in East and Southern Africa known as Participatory Hygiene and Sanitation Transformation (PHAST) was widely acknowledged as good practice (Lidonde, 2000). By 1997 this methodology had became established in Zimbabwe and a 'Toolkit' of visual aids had been developed and distributed throughout the country to 800 Environmental Health Technicians (EHTs) stationed at rural health centres, and 48 out of 57 districts had been introduced to the approach, with an estimated 3800 extension workers trained. In the following few years, although the concept was well known it failed to become translated into well-supported programmes. In all but two districts, although training material had been distributed and district staff were conversant with participatory approaches, they failed to use this in their routine work. The activities were seen as labour-intensive and time-consuming and reliant on trainers with extrovert personalities if they were to be used creatively and with confidence. The lack of dedicated funding was also cited as a constraint. The 5 day training given to field staff was seen as too short, and conventional didactic methods too firmly engrained (United Nations Development Programme/ Water and Sanitation Programme—East Africa, 1998). Thus PHAST remained largely an interesting concept rather than an applied programme and by 2001 the regional planners who had launched PHAST were losing interest. After nearly a decade, the PHAST approach had failed to produce empirical evidence of behaviour change as few practical objectives and indicators of change had been adequately monitored to convince donors to continue support.

Aware of the shortcomings of PHAST, but convinced of the ability of participatory approaches to achieve behaviour change through conscientisation (Freire, 1970), a small pilot project was set up by one of us in 1995 to address these issues (Waterkeyn, 1999). PHAST was taken a stage further: the exploratory dynamic of participatory activities was linked to achievable objectives with measurable outcomes. Health promotion became a campaign focused on a dedicated membership promoting inspired leadership rather than using conventional village gatherings controlled by traditional leadership. It also set out to provide indicators and monitoring systems that allowed cost effectiveness to be measured. The concept of a club is in line with traditional values of conformity in rural society (Gelfand, 1984) and builds on a long history of womens' groups developed throughout the colonial period through the missionaries and philanthropic societies, when an archetype of the smart, club-going woman as a pillar of society developed in Zimbabwe (Burke, 1996).

Materials and methods

We measured effectiveness in terms of observable indicators of behaviour change rather than a health outcome, given the unreliability of health outcomes for operational evaluation (Cairncross, 1990). Given the evidence in the literature for the impact of clean water, sanitation and good hygiene practices on diarrhoeal and other diseases (Feachem, 1984; Esrey et al., 1991; Curtis & Cairncross, 2003), in this research we have used proxy indicators of safe practices to quantify effectiveness. To enable comparisons with other interventions, costs per club member are converted into costs per beneficiary on the assumption that the health of the entire family of the member (taken as an average of 6 per household) will benefit from hygiene improvements of the member, particularly if, as the mother, she controls hygiene standards within the home.

Intervention approach

The intervention was designed primarily to develop community cohesion and a 'culture of health' (Waterkeyn, 1999) within the target population, with the aim to create a demand for sanitation and improved hygiene practices within the home. Community cohesion is promoted through the establishment of Community Health Clubs, which are voluntary organisations, open to all ages, levels of education and status, and to men and women, free of charge. The approach seeks first to change norms and beliefs within a group as these are recognised as controlling behaviour. The Community Health Club approach is a long term strategy to enable people to control the *determinants* of health

(International Union on Health Promotion and Education and World Health Organization, 1986). Health can be improved by addressing the underlying *causes* of poor health such as limited information, poverty, and lack of social capital, including organisational capacity within the community to effect sustainable change. The model evaluated here involves two stages. In Stage 1, health education provides the entry point as a means of galvanising and forming a 'common unity' within the target population. Stage 2 is in the second year, where knowledge is applied to daily life through ensuring good hygiene, safe water supplies and improved sanitation. This paper evaluates the impact of both stages—health education and its application in improved hygiene and sanitation.

By setting exploratory participatory activities within a structure of a syllabus of health knowledge and fixed hygiene objectives, 'structured participation', achieved a more focused group dynamic, which proved popular. The response to a field trial of 60 Community Health Clubs in five wards in Makoni District involving 4813 members (Waterkeyn, 1999) indicated that this strategy could galvanise communities into action. This observation needed to be tested on a larger scale and accordingly a Non Governmental Organisation (NGO) was formed in 1998 to support the Government in extending this approach.

Study area

The Rural Waterpoint Upgrading and Rehabilation Project began in Gutu and Tsholotsho Districts in 1998 whilst the Makoni Environmental Health Campaign expanded the existing pilot project to most of Makoni District in 1999. (Waterkeyn & Waterkeyn, 2000; Waterkeyn, 2003). By 2000, the NGO supporting the MoHCW had started over 500 Community Health Clubs in Zimbabwe, and the approach was also being replicated in three additional areas by other agencies (Mathew & Makuwe, 1999). In this research we focus on the 297 clubs in Makoni and Tsholotsho Districts, with 13,555 members between them (Table 1).

Tsholotsho District (Population 142,713) is in Matebeleland North Province in southwest Zimbabwe. It is drought-prone, and regularly in need of food relief. It has the highest rate of chronic undernutrition, with stunting occurring in more than 25% of children under three (National AIDS Control Programme, 1998). Being almost entirely settled by the politically marginalised Ndebele, development in this district has lagged behind the rest of the country. As farmland is poor, most men are migrant workers in South Africa. The sanitation coverage rate is one of the lowest in the country, probably much lower than the official estimate of 16% (National Action Committee, 2000), largely because the loose Kalahari sands make latrine construction costly as pits must be lined to prevent collapse. There are no shallow wells, and the population relies on 817 deep boreholes, of which 65% are currently estimated to be out of order. The intervention in Tsholotsho was in only three wards, where 32 clubs were formed with 2105 members (hence 12,600 beneficiaries). In 2 years, a total of 832 health promotion sessions were held by three trainers, costing an average of US$3.35 per member or 35c per beneficiary, incluing start-up costs (Waterkeyn, 2001). All targets were met with 100 boreholes rehabilitated and 1200 latrines built in 18 months, subsidised at US$15 each (Zimbabwe A.H.E.A.D., 2000).

Makoni District with a population of 358,733, (1992 census) lies in Manicaland Province in eastern Zimbabwe, along the main road between Macheke and Mutare, settled almost entirely by Shona speakers. In contrast to Tsholotsho, it is readily accessible from the capital, has an effective Rural District Council, and is relatively well developed, having attracted many pilot projects since Independence in 1980. Sanitation coverage is above the official estimate of 24%, which is higher than the national average of 21%, (NAC, 2000) and it has the second highest water supply coverage in the country. As the original field trial for Community Health Clubs took place here in 1995, a few of the original clubs (in five of the 21 wards) are 9 years old. From March 1999 to September 2000, a total of 3731 health promotion sessions were held, costing an average for 2 years of US$0.63 per beneficiary, for training costs

Table 1
Comparison of intervention areas: Tsholotsho and Makoni Districts, Zimbabwe 2000

District	Tsholotsho	Makoni	Total
Population	142,713	358,733	501,446
Wards	19	35	54
Intervention wards	3	21	25
Clubs	32	265	297
Members	2105	11,450	13,555
Graduated members	68%	36%	52%
Beneficiaries	12,630	68,700	81,330
No. of health education sessions (1999/2000)	832	3731	4563
Cost HE per beneficiary	US 35c	US 63c	US 63c
EHTs trained/in district	3/15	14/15	17/30
Family wells	0	839	839
Functioning boreholes	286	676	976
Sanitation coverage	16%	24%	20%
Latrines 1999/2000	1200	2400	3,600
Subsidy per latrine	US$ 15	US$ 20	US$17.5

including start-up expenses (Waterkeyn, 2003). Within this time, 2400 ventilated improved pit (VIP) latrines were built by club members in this district, which were subsidised at US$20 per household. (Zimbabwe A.H.E.A.D., 2000). By mid 2001, there were 265 health clubs in 21 wards with 11,450 members in total and an estimated 68,700 beneficiaries (Table 1).

Activities in the clubs

The training material used for health promotion consisted of 14 sets of illustrated cards based on observation at village level and pre-tested on illiterate villagers. The different topics were reflected in a 'membership card' (Fig. 1a) which provided an outline of the syllabus. Local environmental health technicians (EHTs) were given a 1-week training course on the use of these materials, and the organisation of Community Health Clubs.

Each weekly meeting of health club members focused on one topic, debating common problems, prompted by the participatory PHAST activities. Through repeated interaction a strong and informed leadership, elected by the members, emerged in most clubs before any implementation (such as latrine construction) took place. All health clubs had executive committees, constitutions and annual elections. Application of knowledge gained was emphasised and 'homework' was agreed at every session with members pledging small home improvements and behaviour changes to be effected by the following week (Fig. 1b). These changes included a cover for the drinking water, a ladle to take water, the construction of a garbage pit, a pot/drying rack and a hand washing facility. Home visits between members were arranged to monitor one another's progress. Each club produced its own health songs which were sung at each session and dramas depicting local health issues were developed for other clubs, visitors and for the schools. Health slogans punctuated each session, reinforcing key messages and providing resolve and focus to the group in a traditional manner. To complete the course of 20 sessions took between 6 and 8 months of weekly attendance.

A 'Certificate of Full Attendance' was given to those who had completed *all* topics and an estimated 52% of all members in the two districts achieved this (Table 1). In addition to the promotional Graduation Days, some clubs arranged Inter-Club Competitions with drama and songs, a health quiz, model home competitions, netball and athletics.

Apart from the five pilot wards in Makoni (1995–1997), most health clubs were started in April 1999 and the MoHCW continued sessions until February 2001, when funding ceased. However in many areas EHTs continued to support health clubs and conduct training sessions, and in most wards, health club members continue to meet of their own accord, to discuss and follow up on health issues within their community. In Makoni there are literacy classes, income generating projects such as nutrition gardens, and bee keeping as well as community support for AIDS victims. The approach has become institutionalised and the MoHCW continues to start new health clubs in Makoni.

No.	TOPIC	DATE	SIGNATURE
1	Mapping of Village		
2	Disease Identification		
3	Balanced Diet		
4	Nutrition Plans		
5	Diarrhoea		
6	Salt Sugar Solution		
7	Home Hygiene		
8	Water Sources		
9	Drinking Water		
10	Water Storage		
11	Hand Washing		
12	Bilharzia		
13	Skin and Eye Diseases		
14	Worms		
15	Sanitation Ladder		
16	Sanitation Story : Plans		
17	Malaria		
18	Respiratory Diseases		
19	Tuberculosis		
20	AIDs and STDs		

(a)

No.	TOPIC
1	Village map
2	Health drama and songs
3	Nutrition garden
4	Orchard
5.	Protected water
6	Covered drinking water
7	ladle to take water
8	Individual cups
9	Individual plates
10	Individual blankets
11	Mosquito nets
12	Pot rack
13	Rubbish pit
14	Hand washing facility
15	Safe sanitation
16	Clean yard
17	Disease monitoring
18	Soap making
19	Immunisation
20	Wood lot

A.H.E.A.D. MEMBERSHIP CARD

Name:

Club:

Ward:

District:

EHT:

Date started:

Date finished:

Graduation date:

(b)

Fig. 1. (a) The membership card; front, showing topics for health sessions. (b) The membership card; reverse, showing recommended practices.

The study

Between August 2000 and March 2001, a survey was conducted to analyse levels of behaviour change within the different intervention areas. A systematic sample of 25 clubs was taken from the NGO's register of Health Clubs in each district to include clubs from each ward. Each chairperson in every health club has to keep an accurate record of members. They are listed according to their date of joining and their attendance at health sessions recorded weekly. This club register was used as the sampling frame to select 15 members from each club. This was done by selecting three host respondents, which were taken as the 10th, 20th, and 30th member on the club register. To minimise travel time and expense, cluster sampling was used and four neighbours of the

'host' (who belonged to the health club) were visited, given that they were within easy walking distance. In this way 354 members in Tsholotsho and 382 members in Makoni were visited in their homes unannounced for a spot observation.

A control group for each district was purposively selected, with the assistance of the MoHCW, to match the intervention area with regard to demography, cultural practices, levels of sanitation and water coverage. Although both control and intervention had similar exposure to health promotion, the control had no health clubs and was geographically far removed from the health club areas (typically 30–50 km away) to ensure it was largely unaffected by diffusion of health club ideas. A total of 113 respondents were in the control group in Makoni and 59 in Tsholotsho. In control areas, a list of households was made by the headman or councillor in each village and every *n*th member was selected as a respondent.

A baseline household survey that had been used in Tsholotsho and Makoni in 1997 and 1998 was adapted for the study. It included a structured questionnaire to ascertain factual demography, and spot observation of observable indicators. Each home visit took approximately an hour to complete. All compliance indicators were ascertained by informal observation, and nothing was recorded purely on the *report* of good practice by the respondent. For example open faecal disposal was observed by a walk around the bush immediately surrounding each home to check for unburied faeces. The latrine was inspected by a natural request to use this facility. Hand washing was demonstrated by a child in the home who was asked to assist with hand washing. If a hand washing facility was present it was only recorded as used if there was water inside, and the ground below was damp, or had a pot plant that was obviously well watered. Similarly a request for a drink of water would demonstrate whether a ladle was used to draw water and whether the container was well covered. Young children were asked to point out their own cups, and if this was convincing 'individual cups' were marked as positive behaviour. Pot racks were obviously in use if pots were still in place, and rubbish pits were deemed 'well managed' if there were signs of regular burning, and rubbish separation. Thus observed demonstration, preferably by children, or visible evidence on the ground rather than householders' reporting was the method used to ascertain adherence.

Preliminary findings were discussed with MoHCW staff to seek explanations for the differences found between the two districts in terms of levels of adherence to recommended practices. Three years later in April 2004, 20 in-depth interviews were held in 10 wards in Makoni, with two members (from one club in each ward) to verify claims of activities that were ongoing and ascertain the attraction of the health clubs.

Results

Qualitative data

The success of the intervention in terms of community support is reflected in project reports, and anecdotal evidence given by the NGO and MoHCW officials. These indicated that the methodology had strong appeal for rural communities, and that participants enjoyed the sessions which were social events as well as informative and entertaining. This was indicated by large numbers who joined the clubs, which often had over 100 members. With 52% of members attending all 20 meetings (Table 1) and others attending most of them, support was considered by health workers to be high, as it was unusual for people to attend gatherings with such regularity. Health Clubs continued to meet through the rainy season in most areas; this was considered rare as other projects usually close during the busy agricultural season, particularly if there are no material incentives for attendance.

Members gave reasons for this popularity during in-depth interviews. Whilst the most salient need identified was the enjoyment of gaining knowledge, other reasons mentioned were the interest of varied topics, the challenge to complete the full course, the fun of participating in the discussions, the pleasure of socialising and the strong enjoyment of singing, dancing, drama and competitive sport. Their enthusiasm for model home competitions and their sense of achievement in their own home improvement was evident from their answers and although some mentioned their hope for material assistance from the project this was not the primary motive, as they were clear at time of joining that this was not offered. Pleasure in gaining respect from husband and family was also mentioned repeatedly, as was the sense of unity within the community. Members were specific in their self-identification as being more overtly progressive and better organised, as well as having higher living standards and hygiene than their neighbours, specifically as a result of joining the clubs. Reasons given for some not joining the club were that their husbands forbade it, that they had not been well mobilised, lack of interest, laziness and inability to perceive the benefits of joining the club as well as absence from the area, pregnancy and illness.

The ideal of teamwork between men and women has been strongly promoted by the clubs. Men are encouraged to join health clubs even nominally, as unless the husbands and elders support these groups, women may be restricted in their attendance. In resettlement areas where men are farming at home, as many as 40% of active members are men, although in communal areas where men are largely absent women usually account for over 80% of the members. Women interviewed said the clubs had given them confidence to speak in public and

take decisions, and this public acknowledgement elicited respect from their husbands. Many women have risen from obscurity to become strong community leaders and to be employed by the NGO as co-ordinators; in one case, a woman has become a councillor through her efforts within the clubs. In one ward, health clubs formed a lobby to vote out an obstructive councillor and in many areas, health clubs are used as the main organising body in the village.

Attendance and education

At the time of the survey, 30% of the members in Makoni had finished the training more than 1 year previously; 43% had finished over 6 months to 1 year ago, and 27% were still in training. In Tsholotsho, 65% of the members (more than twice as many as Makoni) had finished over a year before, 9% members finished over 6 months to a year before, and 26% were still in training. Of the total number of members in Makoni, 36% had attended the required number of 20 sessions of the programme, whilst in Tsholotsho 68% had attended all the training, giving an average for the two districts of 52% (Table 2).

In Tsholotsho 40% of the members and in Makoni 34% had completed primary school. In addition 12% in Tsholotsho and 23% in Makoni had attended some senior school (Table 2). This indicates that 52% in Tsholotsho and 57% in Makoni are functionally literate, with the balance who have only a few years schooling assumed to be semi-literate. Very few had attended no school.

Indicators of improved hygiene behaviour

From the wide range of data collected from 736 club members and 172 controls, there were 20 indicators relating to good hygiene prevalence (Table 3). Of these most (except one in Tsholotsho and three in Makoni) showed higher prevalence in the intervention group, with 16 in Tsholotsho and 9 in Makoni having highly significant differences between club members and controls ($p<0.001$).

In Tsholotsho (Table 3), indicators showing particularly high adherence to recommended practices including 'no open faecal disposal' seen in 100% of club members' households compared to 2% in the control, 'individual cups' (97% compared to 22%); 'ladle in use' (95% versus 30%); 'pouring method of hand washing' (91% versus 3%); 'individual plates' (86% versus 10%), and for 'hand wash facility owned' (80% versus 40%). Smaller, but still highly significant differences between intervention and control are seen in 'pot racks' (78% versus 41%); 'swept yard' (73% versus 49%) and 'rubbish pit owned' (64% versus 25%). No-one in the control group practised covered faecal disposal ("cat sanitation"), but it was practised by all those without latrines (57%) in the intervention group. Of the 43%

Table 2
Samples of Health Club members and control groups in Tsholotsho and Makoni Districts, Zimbabwe 2000, comparing demographic and socio-economic characteristics

Survey 2000	Tsholotsho		Makoni	
	Members ($n = 354$) %	Control ($n = 59$) %	Members ($n = 382$) %	Control ($n = 113$) %
At least 20 HE sessions	68	n/a	36	n/a
HE finished 6 mths–1yr	9	n/a	43	n/a
HE finished > 1yr	65	n/a	30	n/a
HE not yet finished	26	n/a	27	n/a
Women respondents	97	75	87	77
Respondents married	78	75	76	80
Respondents widowed	14	20	21	6
Female headed h/holds	76	54	55	53
H/hold size 4–6 members	34	24	36	26
Joint breadwinners	15	8	67	51
Male breadwinners only	38	29	4	19
Conventional christians	44	34	71	67
Apostolic christians	46	46	25	23
Completed primary school (male & female)	40	42	34	30
Primary & secondary school (male & female)	12	12	23	35
Average age of women	43	42	46	47
Average cash income p.a. RoE: US$ 1 = Z$35 (2000)	US$298	US$225	US$378	US$602

Table 3
Comparison of prevalences of observed hygiene indicators in homes of club members and controls, Makoni and Tsholotsho Districts, Zimbabwe 2000

Observed hygiene indicators	Tsholotsho				Makoni			
	% members $n = 354$	% control $n = 59$	χ^2	p-value	% members $n = 382$	% control $n = 113$	χ^2	p-value
Ladle owned	95	46	110.25	< 0.0001	52	42	3.44	0.0637
Ladle in use	95	30	116.01	<0.0001	45	42	0.29	0.5908
Covered drinking water	96	90	—	0.05062*	88	91	0.6	0.4401
Individual cups	97	22	231.96	<0.0001	98	66	99.17	<0.0001
Individual plates	86	10	192.63	<0.0001	97	64	96.75	<0.0001
Pot racks	78	41	33.53	<0.0001	94	82	13.56	0.0002
Borehole water	96	100	—	0.1112*	81	80	0	0.9909
Nutrition garden	60	19	32.99	<0.0001	99	80	63.23	<0.0001
Rubbish pit	64	25	29.64	0.0001	93	82	10.27	0.0013
Pit well managed	60	29	18.53	0.0001	55	29	22.15	0.0001
Swept yard	73	49	23.09	0.0001	44	37	1.39	0.2385
No open faecal disposal	100	2	396.75	<0.0001	88	59	45.48	<0.0001
Latrine owned	43	2	32.77	<0.0001	74	57	8.15	0.0035
Latrine built in last year	42	3	31.01	<0.0001	36	4	46.87	<0.0001
Child faeces in yard	4	0	1.69	0.0807	16	23	2.75	0.0972
Used clean latrine	41	2	32.5	<0.0001	38	31	1.8	0.1792
Hand wash facility owned	80	40	38.84	<0.0001	45	20	11.57	0.0006
Hand wash facility in use	74	39	24.85	<0.0001	35	20	8.06	0.0045
Hand wash facility + soap	39	20	6.82	0.0093	7	1	92.89	<0.0001
Pouring for hand washing	91	3	230.98	<0.0001	38	49	92.89	<0.0001

*p values show significance of difference between intervention and control, by χ^2 or (where indicated *) by Fisher's exact test.

who had latrines, most were built in the last year, and all except 2% were found to be used and clean. Soap was found at hand wash facilities of 39% of the members, versus 20% of the control. Importantly 60% of the members had nutrition gardens as opposed to only 29% amongst the control.

In Makoni (Table 3) there was less difference in hygiene practices between the intervention and control groups compared to Tsholotsho. However there were some significant differences indicated by use of 'individual cups' (98% versus 66%), 'individual plates' (97% versus 64%), 'pot racks' (94% versus 82%), having an active 'nutrition garden' (99% versus 80%), and a 'rubbish pit' (93% versus 82%).

Use of 'borehole water' and 'child faeces in yard' were not significantly different in either Tsholotsho or Makoni. 'Covered drinking water' was on the margin of significance in Tsholotsho ($p = 0.0506$). With those exceptions, every other indicator was significantly better in the households of Tsholotsho club members than the non-club control group.

Home visits and structured interviews

The house visits confirmed anecdotal reports that women had invested considerable effort in decorating their kitchens by moulding intricate furnishings from unbaked polished clay. In Tsholotsho, painted clay dressers, with crockery neatly displayed, were an overt manifestation of apirations to higher standards in the home. All 20 interviews confirmed that clubs continue to meet regularly, even if formal health sessions run by the Ministry of Health have been completed. Meetings focus on health issues in the area, report any public health risks like cholera outbreaks or malaria breeding sites, continue to monitor hygiene practices in the area and organise home-based care for those who need it.

Demand for sanitation

Most of those who have no latrine and still have to use the bush now practise 'cat sanitation'—digging a hole with a badza (hoe) before defecation and then covering faeces afterwards like a cat. Another local innovation observed in Tsholotsho was the 'badza stand', a forked branch to hold the hoe, erected in the yard of those members without latrines, complete with a plastic container for hand washing and some soap. This indicated that the traditional embarrassment over adult defecation had been largely overcome as the badza stand was an overt sign to passers-by of the new practice of cat sanitation and of club membership.

The demand for sanitation was high, with almost all members supporting the concept of safe sanitation and wanting to construct latrines, the only constraint being lack of financial support. In 18 months, 1200 club members in Tsholotsho had built latrines, local adaptions of the standard Blair (VIP) design promoted by the Ministry of Health. Sanitation coverage, 2% in the control area, was 43% in the project areas in Tsholotsho with the balance of 57% practising cat sanitation. In Tsholotsho, with men working elsewhere, women had done most of the building themselves, making interlocking cement bricks, cement slabs and vent pipes as well as cement hand washing facilities, and lined their own pits without bricklayers (Waterkeyn & Waterkeyn, 2000). In Makoni 2400 standard Blair latrines were built in 2 years.

Community Health Club homes are identifiable from a distance by the *badza* stand, wash hand facility, pot rack, washing line, fruit trees and nutrition garden and generally clean appearance of the compound, which are absent in most non-club compounds.

Discussion

Weaknesses and sources of bias

As elections were imminent in Zimbabwe in 2001 at the time, data collection was difficult for the enumerators who were sometimes suspected of opposition activity. With a real danger of physical intimidation, all enumerators were men and thus gender differences may have influenced respondents. In the control areas where the NGO was unknown, men were reluctant to let their wives talk and so in Tsholotsho fewer women were interviewed for the control. For the same reason control groups were smaller than intended, particularly in Tsholotsho where data collection had to be discontinued prematurely due to political intimidation in the area. Nevertheless the control group in each district was large enough for the positive differences between intervention and control to be statistically significant for most indicators.

The selection of the control group areas could have been more accurately matched in terms of demography. Although both districts were well paired in terms of religion, marital status, primary schooling and age in Tsholotsho, there were less female-headed households and income was slightly lower in the control area. In Makoni the control group had many more sole male breadwinners, more respondents attending secondary school and average income was significantly higher.

The differences noted between the two districts may be attributable in part to interviewer bias. Whilst all enumerators were trained together and the field work supervisor did spot checks in all areas, standards could have differed between those that conducted the survey in Tsholotsho and in Makoni. However this would not apply to the comparison between intervention and control groups.

The sample of clubs in each district was chosen to include at least one club from each ward, and so prevent bias arising from different EHTs' methods; however, this meant that it was not precisely representative. The cluster sampling approach used when sampling within the health clubs will have affected confidence intervals and may have introduced bias. In most cases health clubs were purposely started in less advantaged areas, hence the higher incomes of the control group in both Makoni and Tsholotsho from adjacent non club areas. However this will have tended to decrease the margin of difference between control and intervention groups as some equipment may have been more affordable for the control group. Similarly, the higher level of secondary schooling in the control in Makoni may have biased results in the same direction.

How much effectiveness is needed?

It could be argued that the Community Health Clubs were only a limited success, because some of the most important hygiene indicators were seen in less than half the club members' households. For example, soap was seen at only 7% of the hand washing facilities in Makoni and 39% in Tsholotsho. These figures may underestimate the extent of soap use for hand washing; some informants told us later that they avoided leaving their soap on their outdoor wash stand, to prevent it from being stolen or eaten by goats or black kites. Nevertheless these results raise the question of how much change in a behaviour such as hand washing, can be expected from an intervention such as ours. Unfortunately, there is a dearth of rigorous literature on the effectiveness of behavioural interventions in developing countries (Loevinsohn, 1990), but a comparable example is provided by Borghi, Guinness, Ouedraogo, and Curtis (2002) who found that the strong effect of hand washing in preventing diarrhoea meant that a hand washing promotion programme in Burkina Faso, with a measured compliance rate of only 18.5%, was nevertheless very cost-effective. Indeed, in the present case it is remarkable that hand washing with soap had increased at all, as at that stage very little emphasis had been placed on the need for soap in hand washing in the health sessions—although this omission has now been addressed, given recent evidence of the effectiveness of the use of soap in hand washing as a primary barrier.

With regard to sanitation, the achievement of 3600 new latrines within only a proportion of two districts, can be better appreciated when it is set alongside Zimbabwe's total National effort of 8083 latrines

constructed for the whole country of 57 districts in 1998 (National Action Committee, 2000).

It has been argued that interventions to change behaviour should focus on a small number of target behaviours and minimise the number of messages which aim to change them, in order not to dilute their impact (Loevinsohn, 1990). That approach has been followed by most of the published studies of such interventions, which have tended to concentrate on four target behaviours or less (Stanton and Clemens, 1987; Haggerty, Muladi, Kirkwood, Ashworth, & Manunebo, 1994; Curtis et al., 2001). Typically, these have elicited compliance rates of 50% or less. In the present case, the Community Health Clubs approach, which was not implemented primaily as a research project, has achieved similar compliance rates or better on the majority of 20 different indicators.

Motivation and support of staff

Despite initial fears that this approach would be too labour-intensive, EHTs have all reported that health clubs have eased their workload. They coined the expression 'the supermarket approach' to describe how as with a 'one-stop shop', all their business could be done at one meeting, avoiding the usual time-consuming rigmarole of seeking out individual community members for various reasons. Other government ministries took advantage of weekly health club meetings to make their own anouncements. The ease with which the extension workers were able to train communities can be attributed to a large extent to the the fact that a large 'tool kit' of visual aids had already been developed. Trainers reported that the ready made visual aids had been an easy tool to use in participatory activities and the few who were sceptical at the training were soon converted to the approach.

EHTs were popular with the community and were driven by job satisfaction to meet a highly demanding schedule of training in a different club every day. Some EHTs were known to have honoured training commitments with clubs even during their annual leave. Enjoyment at running the sessions, and strong community appreciation of their efforts was a key aspect to their success. Many EHTs became so popular with their members that they posed a threat to the local councillors, though most of these were quick to support the approach, seeing its potential for winning support.

The provision of a reliable motorcycle was probably the most effective material incentive for the EHTs, although they were also given a nominal lunch allowance. Monitoring was done largely by the members themselves, who signed the travel claim forms for the EHT. The Ministry of Health and the NGO at district level met the EHTs only at monthly meetings. The NGO was active only in the initial 1-week training, in setting up the reporting systems, and in monthly meetings. Only one NGO project officer was in each district, supporting the Ministry of Health, mainly with transport to monitor and attend graduations.

The sustainability of the approach is demonstrated by the many clubs with on-going activities which continue to function 14 years after the end of funding, and have a life of their own with minimal outside monitoring or inputs. That the health clubs have contributed in terms of health management for the community is clear.

Reasons for success of the Community Health Club model

Community Health Clubs sought to influence people in a co-ordinated group so that changes were approved by group decision rather than expecting each individual to take personal decisions. As the margin for failure is small in a poor household, individuals are wary of taking risks until interventions have proved reliable and cost effective. With group endorsement, individuals were prepared to undertake change without fear of failure. The underlying assumption was a 'need to conform' within traditional society, and the use of subjective norms as an influence on behaviour (Ajzen, 1988). The fact that health messages were repeated over a long period by peers as well as by authority showed a far more thorough reinforcement than had been applied in other PHAST programmes. The clubs sought to build self-efficacy, which gave members the ability to change with confidence (Bandura, 1986, 1997). The approach also recognised that in semi-literate rural communities there is considerable faith in the power of knowledge as a means of breaking the cycle of poverty. The 'need to achieve' (McClelland, 1961) which had been stimulated by intellectual activities at school, was left fallow once they married early and became mothers. We surmise that one appeal of the health clubs was their ability to feed the intellectual starvation of intelligent mothers in isolated village life where there are few opportunities for knowledge exchange and debate. The Community Health Club model, far from being a theoretical construct, was based on a sound psycho-social observation, and set in the paradigms of community development and social capital (Chambers, 1983; Kawachi & Berkman, 2000).

Variables affecting adherence to recommended practices

Our data show that Community Health Clubs can, under typical conditions, achieve high levels of health knowledge and hygiene behaviour change across a wide range of interventions, but this is not necessarily always the case. Tsholotsho consistently achieved higher levels of behaviour change than Makoni. A number of variables could explain why Tsholotsho was more receptive to change.

During discussions held with MoHCW staff to analyse the differences between the results in the two areas, it was strongly suggested by EHTs that the main difference between the districts is that the women in Makoni are full-time farmers and have far heavier agricultural demands than in Tsholotsho where most women live from their husbands' remittances. This is borne out by the results that show 38% of women in Tsholotsho, but only 4% in Makoni, are dependent on their husbands' income. By contrast, 67% of women of Makoni are joint breadwinners and spend most of each day in their fields for much of the year, and cannot always attend to the high level of hygiene recommended in the clubs. In arid Tsholotsho, where farming is difficult and cattle are the basis of subsistence, only 15% are joint breadwinners. Therefore it is surmised that these housewives have more time to keep their compounds clean and attend to hygiene recommendations, and this is also reflected in the high investment of their time in the decoration of their kitchens. The 41% increase in the prevalence of nutrition gardens, despite the arid nature of the area, indicates the strength of the club activities. Women's time is an important determinant of their ability to adopt healthy behaviour in many settings (Leslie, 1989).

The outstanding variable is the *extent* of the intervention in each district. The Ministry of Health was most active in Makoni where the project extended throughout the district and the methodology was fully entrenched. In Tsholotsho only three EHTs in three of the District's 19 wards were involved (Table 1), and they deliberately restricted themselves to a maximum of seven clubs per year, whilst in Makoni District, EHTs responded to the demand, splitting clubs when they became too large. EHTs in Makoni monitored an average of 17 clubs each in 3 years and thus could do fewer home visits than in Tsholotsho. Thus overextension and a shortage of EHT time could account for the lower compliance in Makoni. It may also be worth noting that the most effective area in Tsholotsho was run by one of the three female EHTs, who have all had signifcantly higher impact on levels of behaviour change amongst health club members than their male colleagues.

The MoHCW offered the EHTs little supervision in Tsholotsho, yet this area achieved the highest rates of adherence. With 17 different EHTs in the two districts, it may be imagined that their level of commitment would vary and affect the success of different clubs they facilitate. However all the EHTs, with only one exception, were remarkably dedicated to the programme, investing far more effort than duty demanded. If the Hawthorne Effect had been a factor that influenced productivity, it should have produced better results in Makoni, where the MoHCW was more supportive and there was regular outside interest, rather than in Tsholotsho where there were seldom visitors. It would appear their popularity with the community was more of an incentive for EHTs to perform than incentives and supervision by their superiors.

Tsholotsho is the more underdeveloped area and in the three intervention wards, this was the first water and sanitation project since Independence in 1980. Therefore it is reasonable to infer that people may be more motivated and willing to invest more time and effort in marginalised areas, than in areas like Makoni where donors have been more plentiful, and their assistance taken for granted.

Where the baseline is low before intervention, higher percentages of change can be achieved. This would explain the relatively small changes in Makoni in some practices which have been recommended by MoH for years, such as using a ladle, pouring for hand washing, having a pot rack, a rubbish pit and cleaning the latrine. Covering water and sweeping the yard are traditional practices which show equally high prevalence in the control groups in both areas. Again, there is no significent difference in the use of borehole water for drinking as this was already practised universally in both Tsholotsho and Makoni. The impact of the intervention can be seen more strongly in practices encouraged uniquely in the project, such as the use of individual plates and cups. The use of 'cat' sanitation in the absence of latrines is also a new recommendation by the NGO, which proved highly acceptable. In Makoni, this practice increased by 14% in spite of the already high sanitation coverage, and in Tsholotsho 'cat sanitation' was adopted by all the 57% of respondents without latrines. By contrast it was not in evidence anywhere in the control area.

Conclusions

This intervention has demonstrated that by altering the norms that direct activity, a 'culture of cleanliness' can be created that will direct all behaviour towards more effective control of family health. Regular health sessions provide a forum in which peer pressure can influence members to conform to newly established norms.

The response of the Community Health Clubs in Zimbabwe shows that with appropriate resources, this methodology could halve the number without VIP latrines in the project area within a few years. With its effective cadre of MoHCW field workers, and with reliable transport for EHTs, the approach described here could be readily scaled up so that Community Health Clubs became institutionalised within the MoHCW in each of the country's 57 districts. It is estimated that there are 1,225,740 households without latrines (NAC, 2000) in Zimbabwe. To halve this by 2015 would require

only 51,072 latrines to be constructed per year, which averages at 896 per district. The experience in Makoni and Tsholotsho has demonstrated that with good support, at least 1000 latrines could be constructed per year through Community Health Clubs in each district. It would appear that given a motivated and mobile MoHCW field staff, good training materials and logistical support, there is little resistance from the community to improve hygiene and sanitation if the Community Health Club approach is used and programmes may even find it difficult to fulfill the demand for sanitation generated by this approach.

Where latrines are not feasible—for instance, in conflict settings or nomadic communities—the ready adoption of cat sanitation by health club members in our study shows an alternative path to the sanitation goal. Burial of excreta breaks the faecal-oral transmission route and constitutes the first stage of sanitation consciousness. Without any material subsidy, this practice allows almost 100% safe sanitation without construction of latrines. If time and resources allow, the community understanding of the need for safe sanitation may be expected lead to latrine construction. In the interim, an adequately sanitary environment is maintained at minimal cost. Of course, the physical technology of the *badza* stand or its equivalent must be accompanited by a viable approach to behaviour change, such as Community Health Clubs, to ensure its use and overcome embarrassment about adult defecation; when club members erect a *badza* stand, it is an overt statement of their practice of cat sanitation.

The methodology has also been replicated successfully outside Zimbabwe, even under difficult conditions (Waterkeyn & Waterkeyn, 2002). For example, in post-conflict Sierra Leone where within 6 months, 50 recently resettled Moslem villages reflected levels of adherence similar to those achieved in Tsholotsho. More recently, 120 Community Health Clubs have been successfully started in Internally Displaced People's camps in war-torn Northern Uganda, which is the first time the approach has been used in a peri-urban setting.

The following considerations affect the applicability of the approach to other developing countries:

- The more underdeveloped the community, the more effective the health clubs will be in achieving behavioural changes as they appeal strongly to illiterate and disadvantaged people, who lack a sense of self-efficacy and respond more readily to change within the context of group conformity.
- Where the baseline prevalence of good hygiene behaviour is low before the intervention, very significant changes can be achieved, especially in terms of improved sanitation and specific hygiene practices that can be controlled by the members themselves.
- Contrary to expectations, the approach does not require a certain level of literacy to be successful.
- Optimal levels of community support are gained by committed trainers; support to them in terms of reliable transport, appropriate training materials and fair incentives are essential, and these will be the main costs of the programme.
- Although the optimal number of clubs that can be managed by one trainer at any one time is around five, this must be weighed against cost considerations. The larger the number of beneficiaries, the cheaper the programme will become, but it may be less effective.
- Once the health clubs are established, they can be continued at nominal expense, with minimal monitoring; thus over time the costs per beneficiary fall.
- The membership card, a clear schedule of training and the public acknowledgment of dedicated members with a certificate, seems enough to attract community support to join health clubs, even without immediate material incentives.
- Health sessions should be continued until all those who want to join in every village have been given the opportunity; this may involve enrolment over at least 4 years.
- To sustain the life of the health clubs, health promotion should lead not only to the implementation of water and sanitation programmes, but should also continue to address all the needs of the community. At its most effective, the health club should become a vehicle for other initiatives such as income generation, adult literacy, human rights, and AIDS support and care for the terminally ill.
- Ideally, funding should be sourced from agencies interested in holistic development rather than short term, emergency interventions aimed at eradicating one particular disease.

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A Catalogue of Visual Aids for Promoting Health in Rural Communities

APPLIED HEALTH EDUCATION AND PEOPLE CENTRED DEVELOPMENT

Developed by
Zimbabwe
A.H.E.A.D

Participatory Training Material for use by field staff in Water and Sanitation Programmes in Central and Southern Africa

CONTENTS:

ILLUSTRATIONS:

Bulelwa Madekurozwa, William Kandiero,
Kuda Makurumure. Juliet Waterkeyn

MATERIAL DEVELOPMENT AND DESIGN:

Juliet Waterkeyn

FORWORD

Whilst there is a strong recognition that family health can be improved by safe, abundant water and good sanitation, there is less focus on health education as one of the most cost-effective ways to improve living conditions in the rural areas. Part of the reason may be that training communities in health is often perceived as a vague activity, which is often assumed to be unquantifiable statistically, and therefore less appealing to fund. However, in the past five years the opposite has been demonstrated by the 'Community Health Club' methodology, which has achieved high levels of response and behavioural change, as well as demand-led sanitation initiatives from rural communities.

Zimbabwe A.H.E.A.D has pioneered a unique strategy of combining 'participatory' training and the use of Womens' Groups, into a form of 'participation with a structure'. Health education becomes the entry point into a community, prior to any implementation of a water and sanitation project. These sessions are conducted for a six month period on a regular weekly basis, using the training material in this catalogue. Such is the appeal of the visual aids and the participatory techniques that attendance rates are high. In the last year, for example there was an average of 66 people per session in over 200 health clubs. Over half of those that have joined the clubs have attended all 20 topics offered and 'graduated' with a well-earned certificate.

Zimbabwe A.H.E.A.D supports Ministry of Health field staff with initial training in the Community Health Club Methodology and the supply of the training materials listed here. Health education can be conducted in a way that is not only quantifiable but achieves tangible results with positive behavioural change. Clinics have reported significant reduction in diarrhoea and skin diseases in health club areas. However the greatest result is that as the communities have become organised. Through working towards the common goal to upgrade home hygiene, they have developed the capacity to undertake other projects and to take responsibility for health issues within their village.

'Applied Health Education and Development' (A.H.E.A.D) signifies this three phase approach, which starts with health education, leads on to its application in a water and sanitation project, then to other development initiatives that contribute to poverty alleviation. In Zimbabwe, there are now over 10,000 members in health clubs started by Zimbabwe A.H.E.A.D, as well as another 5,000 in two other DfiD funded Districts where the Organisation provided the training for this system to be replicated. The popularity of the Community Health Clubs at the grass roots, and interest in the methodology at National level, led to the foundation of Zimbabwe A.H.E.A.D in 1998, in order to promote health education through the Community Health Club methodology.

It is with this in mind that this catalogue has been produced so that other Development Agencies can take advantage of these tried and well pre-tested training materials. Zimbabwe A.H.E.A.D can also offer training in the use of these participatory materials and in the Community Health Club methodology. As these materials have been developed in Zimbabwe they are culturally appropriate only for the region, but the Organisation can assist other organisations to bring their own training material to completion. With a fully equipped graphic studio and video-editing suite, the Organisation offers a regional Resource Centre for the production of appropriate training materials for development.

Juliet Waterkeyn (DIRECTOR) July, 1999

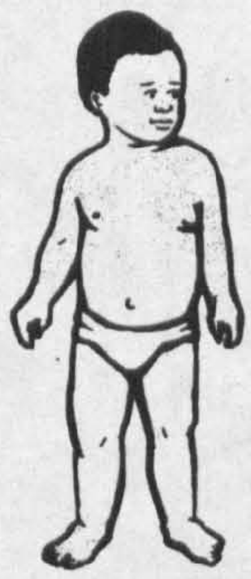
Set No 1: Community Members

Illustrator: B. Madekurozwa, 1994

1

A baby

2



A toddler

3

A pre school boy

4

A pre school girl

5

A school girl

6

A school boy

7

Nurse Tanaka

8

An unmarried man

9

A young mother

10

A young father

11

An aunt

12

An uncle

13

A grandmother

14

A grandfather

"Nurse Tanaka" Role Play:

Distribute the cards to different members of the group. Each person with a card must imagine they are the person illustrated on the card, and invent a condition that entails going to the Clinic. The person with the card showing the Nurse acts as 'Nurse Tanaka' at a Clinic. The others come forward one by one and present the symptoms of their imagined illness to her. She must diagnose what their problem is and recommend appropriate treatment. A discussion follows with the audience who must decide whether each condition could be prevented.

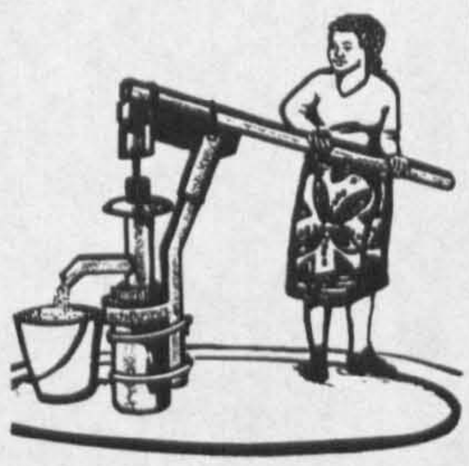
Set No 2: Water Sources

Illustrator: B. Madekurozwa, 1994

1

Blair Handpump

2



Bush Pump

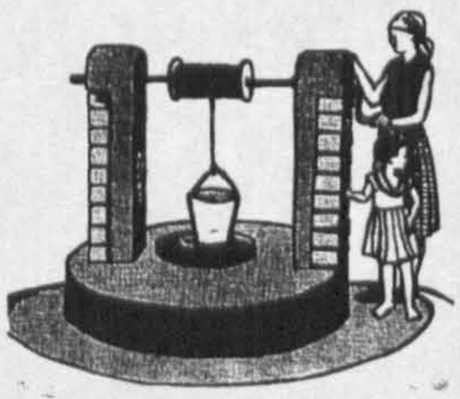
3

Bucket Pump

4

Open Well

5



Protected Well

6

Dam

7

Surface Rain Water

8

Unprotected Spring

9

Protected Spring

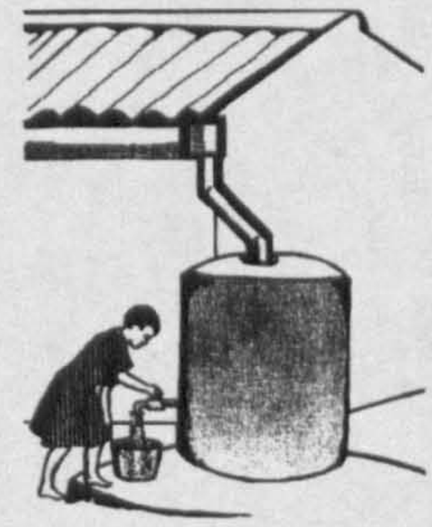
10

River

11

Stream

12



Rain Harvesting

13

Rock Catchment

14

Piped Tap

15

School Sand Filter Tank

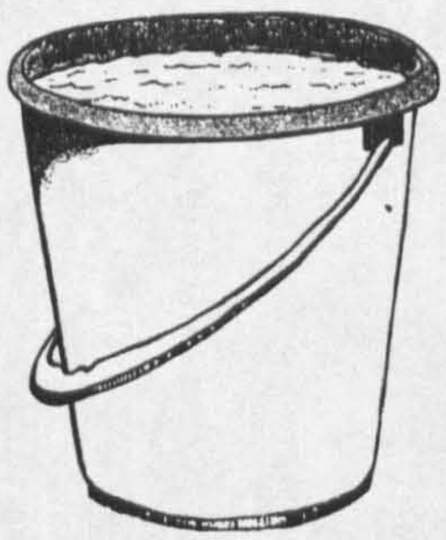
How to use Set 2:

The illustrations depict all the different alternatives that are available to rural people in Zimbabwe for collecting water. Trainers should only give the appropriate cards out to the group, depending on what is locally known and what is possible to introduce through the Project. (For method see page 5).

Set No 3: Water Storage

Illustrator: B. Madekurozwa, 1994

1

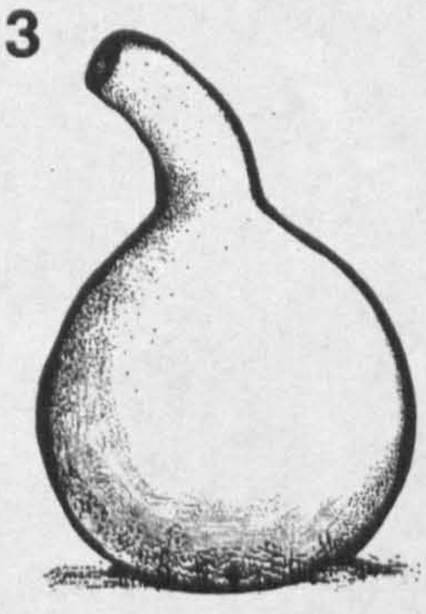


A bucket with no cover

2

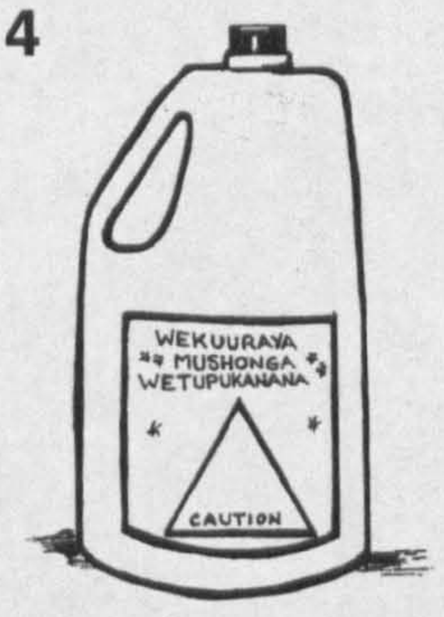
A bucket with a cover

3



A calabash

4



Insecticide bottle

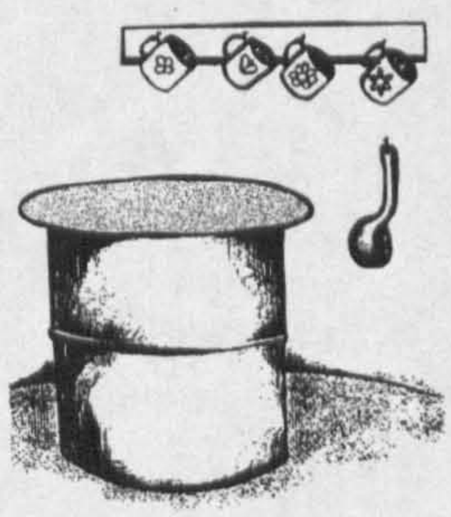
5

Plastic juice bottle

6

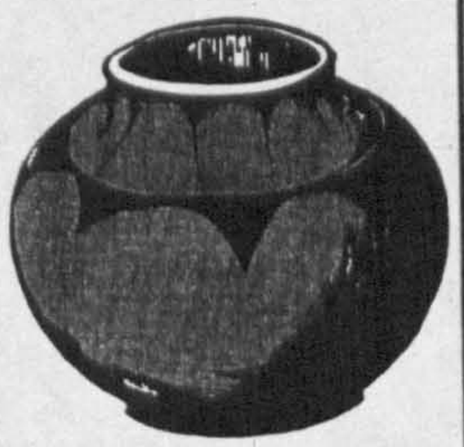
Rain harvesting drum outside

7



Water storage drum inside

8

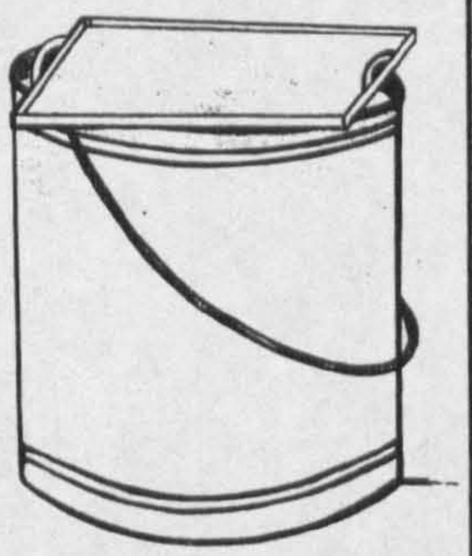


Traditional clay pot no cover

9

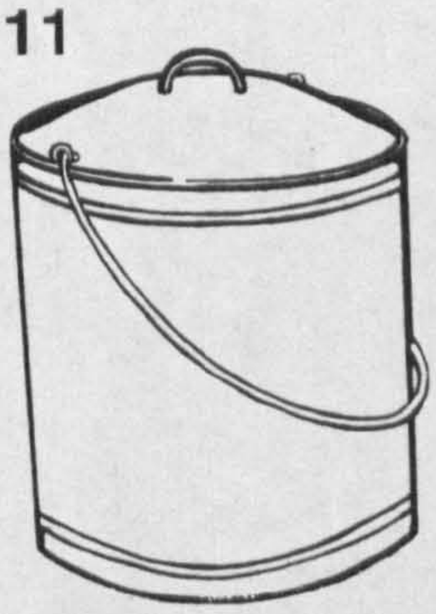
Traditional clay pot with cover

10



Metal bucket with ill-fitting lid

11



Metal bucket with good lid

How to Use Set 2, Set 3 & Set 4:

These illustrations show different ways that drinking water is stored and taken in the rural areas of Zimbabwe. Use the activities described below to provoke a discussion as to the best method to prevent contamination.

"Three Pile Sorting Activity"

Divide the club members into groups of less than 15 people. Each group then lays out a set of cards on the ground face up. Once everyone has had a chance to look at the cards, each member should take one card at a time and decide if the subject depicted is 'good, bad, or average', and put it in one of the three piles. Having come to an agreement, the group should then take the 'Good' pile and rank them from the best option to the least preferred. The same should then be done for the 'average' and 'bad' piles so that a line of cards is arranged in priority.

"Priority Line-up Exercise"

The group then presents their decision to the whole club, by forming a "Priority Line-up". This is done by standing in a line according to priority and holding up the card for all to see. Each person then explains the advantages and disadvantages of the situation shown on the card they are holding. This activity can also be done to evaluate current practices. Everyone in the audience is asked to stand behind the picture representing their own practise, and then to stand behind their preferred choice. Discussion should follow and the club should take a decision which option to adopt as a policy.

Set No 4: Drinking Water

Illustrator: Bulelwa Madekurozwa, 1994

Taking water by hand

Taking water with a cup

Taking water with a jug

Boiling drinking water

Mother giving water with a ladle

Mother giving water with a jug

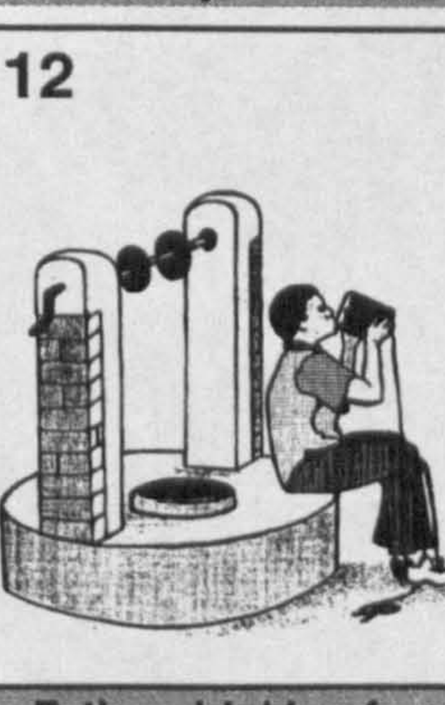
Mother giving water with insecticide bottle

Boy taking water from a juice bottle

Sharing a cup

Drinking straight from the bottle

Drinking from the ladle



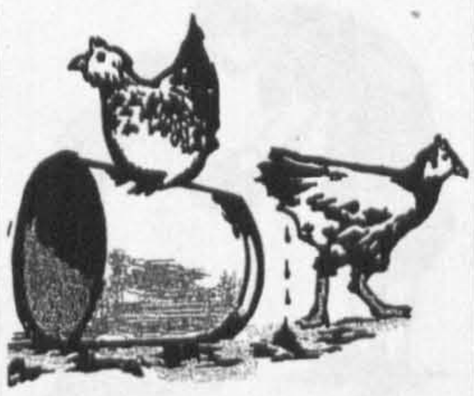
Father drinking from the bucket

PARTICIPATORY ACTIVITIES: ***Club members in Makoni District are doing a participatory activity, arranging the cards to make a story about the spread of germs. This is a creative and absorbing exercise that gives everyone the chance to contribute their ideas. Zimbabwe A.H.E.A.D has in the past three years initiated over 200 Community Health Clubs in Zimbabwe.***

Set No 5: Germ Theory

Illustrator: Bulelwa Madekurozwa, 1994

1



Contamination of water container

2

Contamination of water left uncovered

3

Contamination of food left on ground

4

Contamination of hands from faeces

Taking water with dirty hands

Contamination of mothers hands

Mother preparing food with dirty hands

Mother taking water with dirty hands

Eating contaminated food 1.

Eating contaminated food 2.

Girl and boy with diarrhoea

Mother with stomach ache

13

Boy with diarrhoea

Father vomitting

How to use Card Set 5 and 6:

These two sets represent the positive and negative behaviours associated with home hygiene. The 'Germ Theory' is the Oral Faecal Route that is responsible for diarrhoea, so training should also include practical demonstration of Oral Rehydration Solution. The 'General Hygiene' cards are used to 'block the route' and demonstrate preventative interventions. See page 9 for method.

Set No 6: General Hygiene

Illustrator: Bulelwa Madekurozwa, 1994

1

Keeping eyes clean

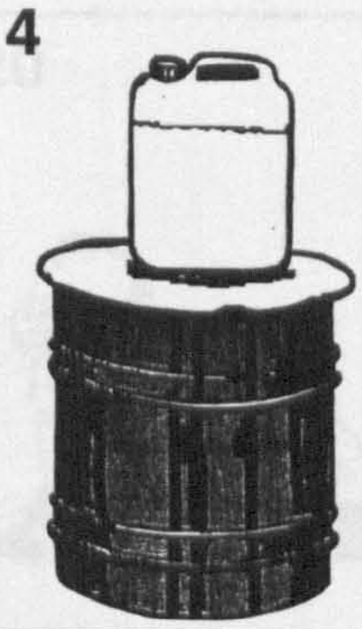
2

Washing hands after visiting latrine

3

Pouring method of handwashing

4



Storing drinking water separately

5

Water from a clean source

6

Boiling contaminated water

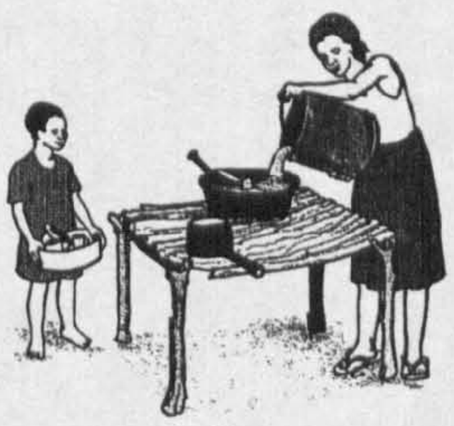
7

Storing water with a lid

8

Covering left over food

9



Washing plates after eating

10

Drying plates on a pot rack

11

Disposal of toddlers' faeces in a latrine

12

Keeping compound free of garbage

13

Burying faeces (Cat Method)

14

A covered latrine

15

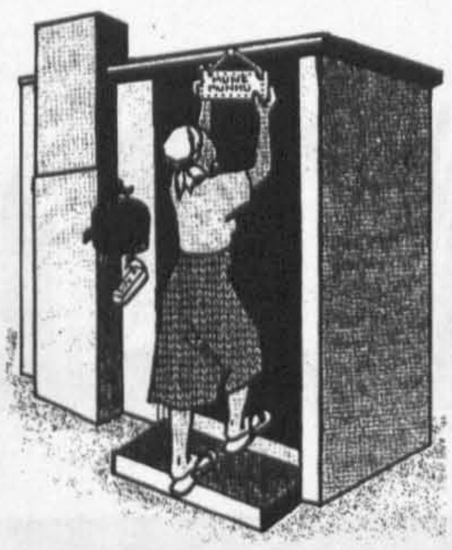
Burning garbage in a pit

16

Using ash to stop flies

Set No 6: General Hygiene (Contd)

17



Blair latrine (VIP) with wash hand facility

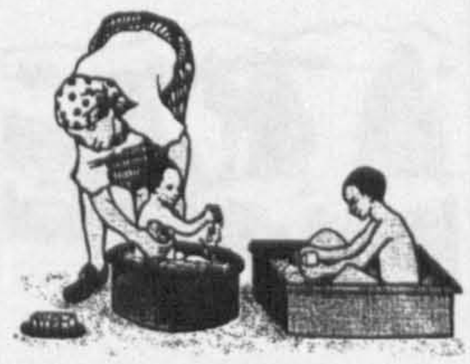
18

Keeping the latrine clean daily

19

Individual cups for each family member

20



Washing children daily

How to Use the General Hygiene and Germ Theory Sets.

Both these sets are intended to illustrate the faecal-oral transmission route of diseases such as diarrhoea, dysentry and cholera. They can be used in many ways to provoke discussion. However the four most established exercises are 'Blocking the Route', 'Pre-arranged Story', 'Story with a Gap' (SWAG) and 'Open-ended Story'.

Story telling

All the card sets can be used creatively by the members to make stories. There are three different ways to prompt stories:

1. Pre-arranged Story

Give out the cards in the "Germ Theory" set and ask the members to make a story using all the cards. This will result in a pre-arranged story that is fairly predictable, showing transmission of diarrhoea. Having arranged the cards, the "Good Hygiene" cards can be used to block the route.

2. Open-ended Story

This means that only the opening situation of a story is given by the facilitator in the form of only one card, that should suggest a story to the participant, who must use imagination to complete the story in any way that he/she likes. This is a more unpredictable method that will also help to give the facilitator an understanding of the groups' misconceptions or lack of knowledge on the subject under discussion.

3. Story with a Gap (SWAG)

This activity is another variation of the above, where two cards are given to the group, i.e. the 'before' and 'after' situation. The participants have to imagine what happens in-between, to allow the first situation to become the second situation. Any appropriate cards within these sets can be chosen to spark a discussion using this technique. For example on this topic, the facilitator could give out No.2. (Germ Theory) and No.7. (General Hygiene) for an exercise on protecting water to prevent diarrhoea.

Blocking the Route

This exercise is divided into two stages:

1. Demonstrating the 'route' of transmission of the disease.
2. Thinking of ways to stop the transmission, i.e. 'blocking the route'.

Start by giving out the cards that show the transmission cycle of the disease, e.g. in this case the "Germ Theory" set.

Ask members to come forward and arrange themselves into a line that shows how each picture links to the next in a transmission cycle.

After general agreement has been reached give out the "Good Hygiene" set and ask each person with a card to come forward and stand in front of the person who holds a card showing the practise that is the reverse of their own card. In this way they will 'block the route' of transmission by a good hygiene intervention that will prevent the disease from spreading.

Once everyone has agreed on the correct position of each intervention, ask those holding the Transmission Route to sit down. Those remaining should arrange themselves according to priority, in terms of which intervention can be the most readily accepted, and possible to achieve.

Consensus within the group should be reached as to what behavioural changes are to be adopted immediately by club members.

Card Set No 7: Bilharzia

Illustrator: Wilberforce Kandiero, 1995

1

Water collection at contaminated source

2

Swimming at contaminated source

3

Washing at contaminated source

4

Washing clothes at contaminated source

5

Washing pots at contaminated source

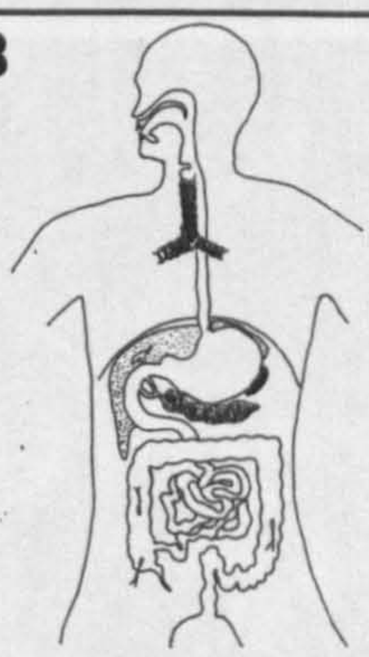
6

Defecating in dongas

7

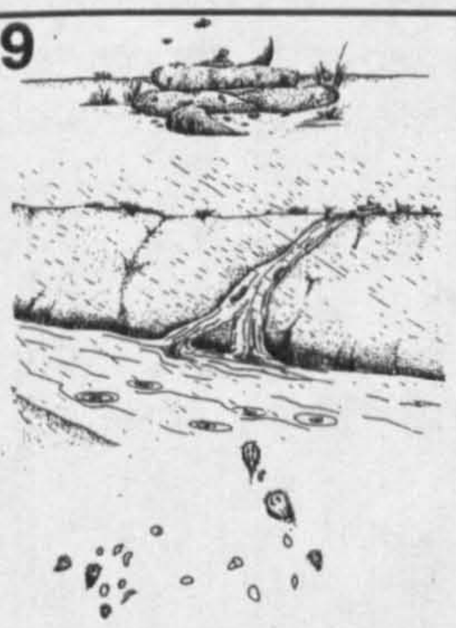
Urinating near water

8



Life Cycle: inside the human host

9

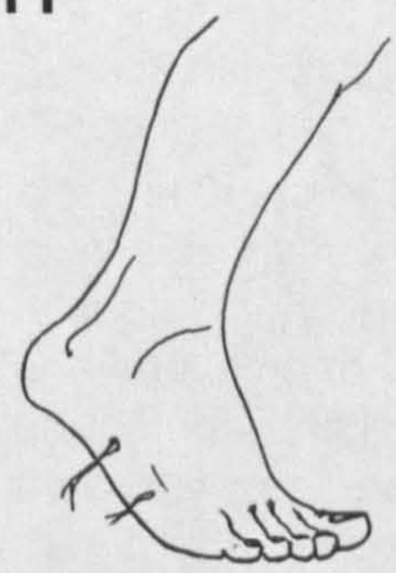


Life Cycle: eggs laid in faeces

10

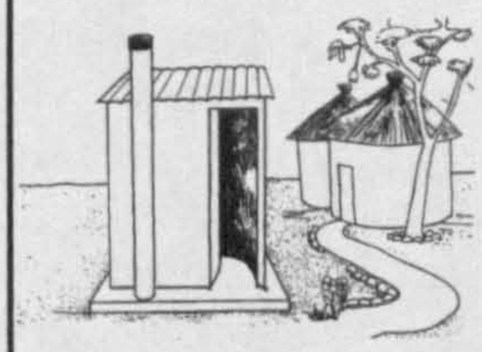
Life Cycle: the snail host

11



Life Cycle: finding a human host

12



Blocking the Route: A Blair Latrine

13

Blocking the Route: Covering faeces

14

Blocking the Route: Killing the snails

15

Blocking the Route: Protected water

16

Blocking the Route: Washing at home

Card Set No 7: Bilharzia (Contd)

17

Blocking the Route: Washing plates at home

18

Blocking the Route: Washing plates at home

19

Blocking the Route: Protecting feet from water

20

Blocking the Route: Taking medicine

How to use Card Sets 7 - 10:

The red card sets all deal with preventable diseases. To find out which diseases are most commonly known in the area and to ascertain the level of knowledge within the community, it is a good idea to play "Nurse Tanaka" on page 3.

Once the members have identified the main diseases that are a problem in their area, a more informative session can be held on each subject. The facilitator must ensure that the Transmission Route of each disease is well understood, so that the community can understand the reasons for each preventative method.

1. Transmission Route

Start by giving out the cards that show the transmission cycle of the disease, e.g. in this case the cards in each set are:

Bilharzia	Nos: 8.9.10.11
Malaria	Nos: 1,2,3,4,5,6
Round Worms	Nos: 1,2,3,4,5
Threadworms	Nos: 6,7,8,9
Scabies	Nos: 1,3,12 or 2 & 13
Ring worm	Nos: 1,3,15

Ask members to come forward and arrange themselves into a line that shows how each picture links to the next in a transmission cycle. If they cannot explain fully the facilitator must ensure their complete knowledge.

Each set has a Trainer's Guide giving the transmission, symptoms and cure of each disease, which should be learnt by the trainer so that correct information is given.

2. Blocking the Route

After general agreement has been reached give out the cards that show preventative interventions and ask each person with a card to come forward and stand in front of the person who holds a card showing the practise that is the reverse of their own card. In this way they will 'block the route' of transmission by an intervention that will prevent the disease from spreading.

Once everyone has agreed on the correct position of each intervention, ask those holding the Transmission Route to sit down.

3. Priority Line-Up

Those holding the 'blocking cards' should arrange themselves according to priority, in terms of which intervention can be the most readily accepted, and possible to achieve. The group can be asked to vote which intervention they will adopt individually by standing behind the picture that they personally support. Consensus within the group should be reached as to what behavioural changes are the most practical to be adopted immediately by club members.

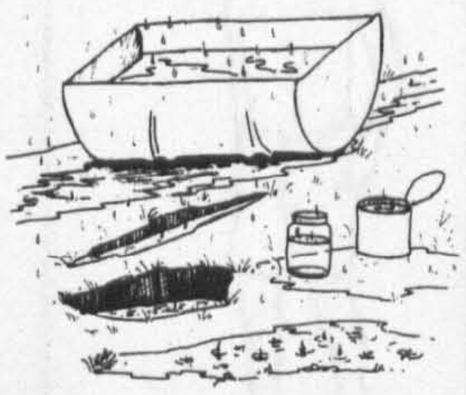
4. Prevention and Cure Activity

Two people are selected and given a card each, showing a sick person and a healthy person. The rest of the 'blocking cards' are given out to the audience. The 'sick person' must describe the symptoms of the disease. Then the 'healthy person' must tell all the ways she has prevented the disease. As she calls them out the person with that card in the audience comes forward to block the route. The sick person must then say how to be cured. General discussion should follow, as to what actions should be taken.

Set No 8: Malaria

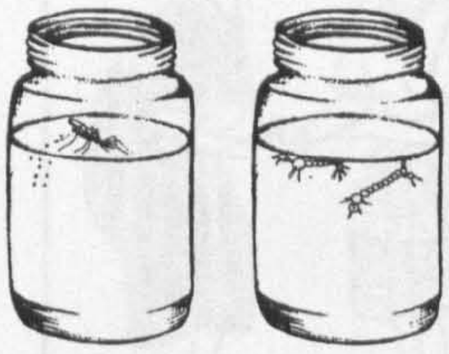
Illustrator: Juliet Waterkeyn, 1997

1



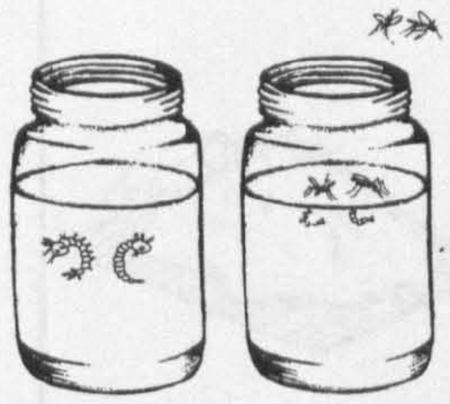
Rains leave water standing

2



Mosquito lays eggs which hatch into lavae

3



Lavae change into pupae and mosquitos

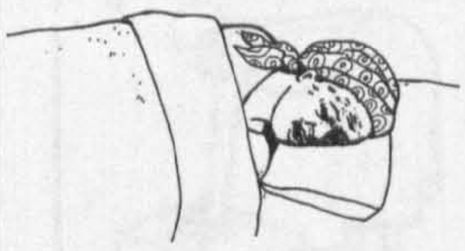
4

Mosquito bites person infected with malaria

5

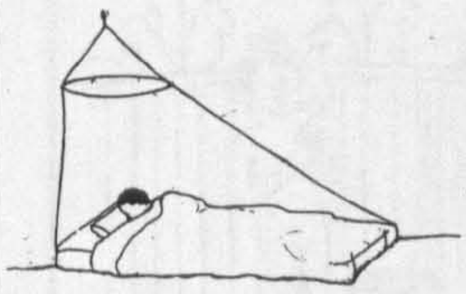
Mosquito bites person without malaria

6



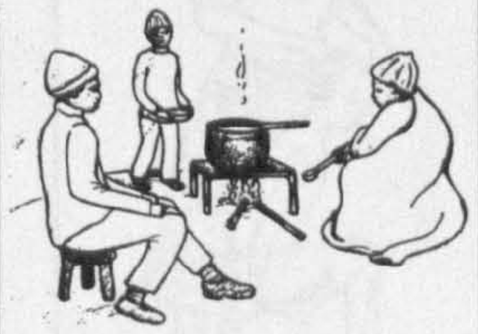
After 12 days second victim becomes sick

7



Using a mosquito net at night

8



Covering up well at night

9

Emptying standing water / filling pot holes

10

Pouring old oil on standing water

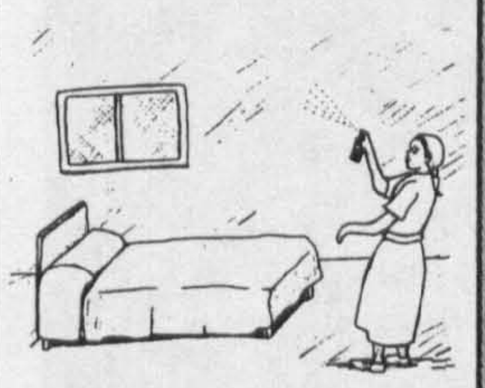
11

Spraying around the homes

12

Cutting grass around homes

13



Spraying rooms with wire mesh on windows

14

Burning mosquito coils or cow dung

15

Washing with mosbar soap every night

16

Taking Malaria Pills

Set No 9: Skin Diseases

Illustrator: Juliet Waterkeyn, 1997.

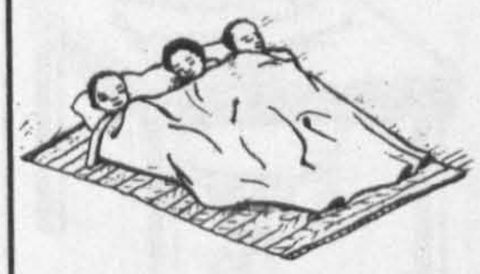
1

A child free from skin disease

2

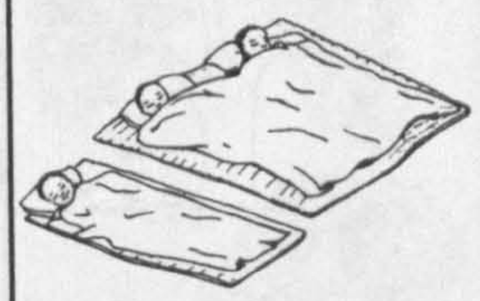
Hand shaking

3



Sharing bedding

4



Not sharing bedding with infected person

5

Not sharing clothing with infected person

6

Washing clothes of infected person

7

Wash before sleeping, with soap

8

Shaving hair of infected person

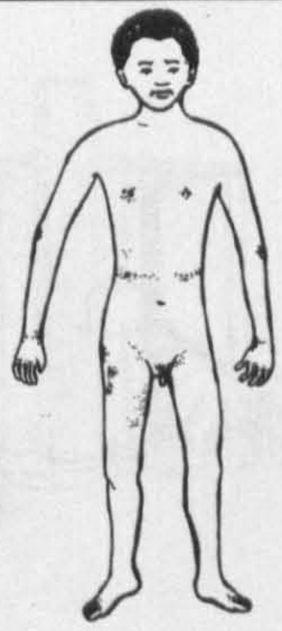
9

Apply ointment as instructed at clinic

10

Wash all bedding after cure

12



Location of scabies

13

The scabies mite

How to use Card Sets 8 and 9:

The best method of using these card sets is to outline the 'Transmission Route', and then do the 'Blocking the route' exercise. Both activities are found on Page 11. Each set also contains a 'Trainer's Guide' which outlines the transmission, symptoms and cure of each disease.

15

Location of Ringworm

16

Ringworm

Set No 10: Worms

Illustrator: Juliet Waterkeyn, 1997

1

A healthy child without worms

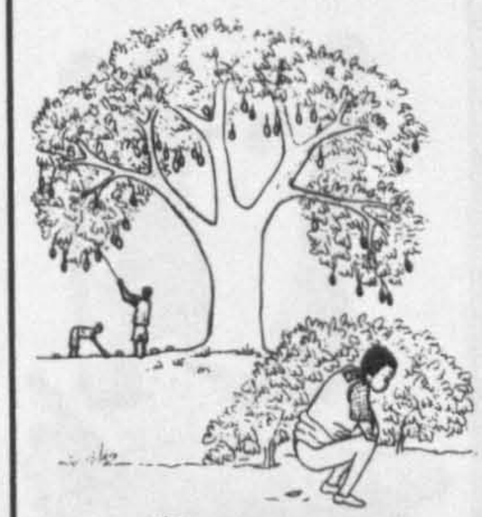
2

Round worms

3

A child with round worms, feeling tired

4

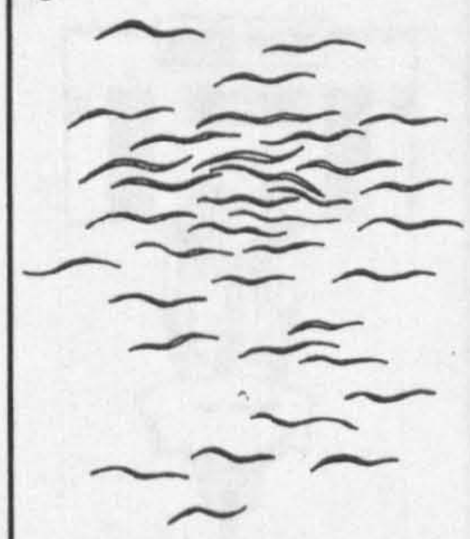


Defecation near fruit tree

5

Child eating unwashed fruit

6



Thread worms

7

A child with thread worms, scratching

8

A child with thread worms, defecating

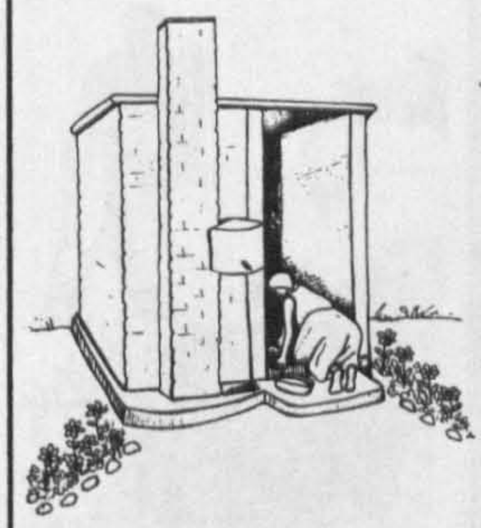
9

Child contaminated by faeces on the ground

10

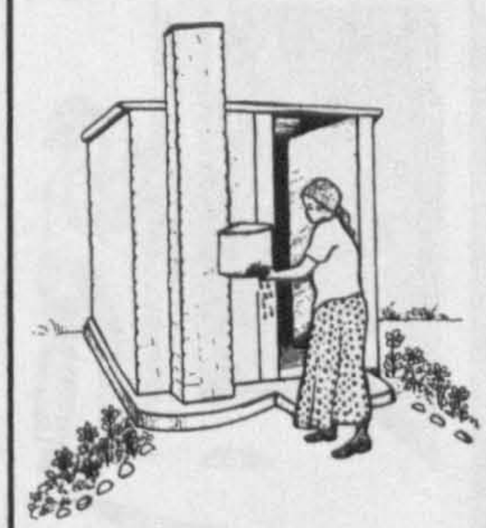
Keeping compound free from faeces

11



Keeping latrine floor washed daily

12



Washing hands after defecating

13

Washing all uncooked fruit before eating

14

Taking medicine for worms every 6 months

15

Cutting fingernails frequently

How to use Card Set 10:

Whilst the transmission and the symptoms for Threadworms and for Roundworms are slightly different, the interventions to 'block the route' are the same, so use the same method shown on Page 11. Trainers Guides are included in the Set.

Set No 11: Sanitation Story

Illustrator: Kuda Makurumure, 1998

1

Attending Health Club session

2

Graduating, with an Attendance Certificate

3

Digging the pit

4

Paying for the labour

5

Making Bricks

6

Buying Cement

7

Lining the pit

8

Making the slab

9

A temporary 'Tree' Latrine

10

Moving the slab

11

Planting a fruit tree

12

Starting the superstructure

13

Completing the superstructure

How to use Card Set 11:

This card set illustrates the story of a committed member of a Health Club. Having graduated with a certificate for full attendance, the member then starts to build a latrine. This may involve her husband and possibly hiring a labourer to dig the pit and a builder to line it. To help members analyse their situation and for the Project Officer to be able to assess the current sanitation status within the club, these cards are invaluable. Having made the story, the participants then line up displaying their cards to the rest of the gathering who are then asked to stand behind the picture that illustrates their own position. They are then asked to stand behind the picture that they aspire to, in a given length of time. Plans are then made to realise this goal.

Set No 12: Sanitation Ladder

Illustrator: Kuda Makurumure, 1998

1. EXPOSED FAECES

1a

Defecating in dongas

1b

Defecating near home

1c

Disposal of faeces using dogs

2. COVERED FAECES

2a

Covering with leaves and stones

2b

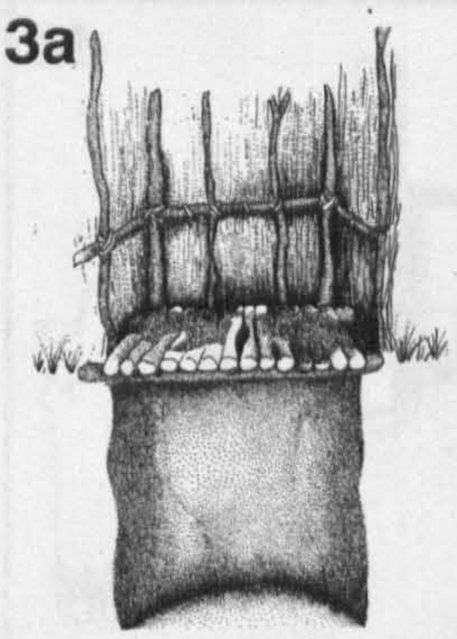
Cat sanitation

2c

Covering with soil/ash in rubbish pit

3. WELL BURIED FAECES

3a

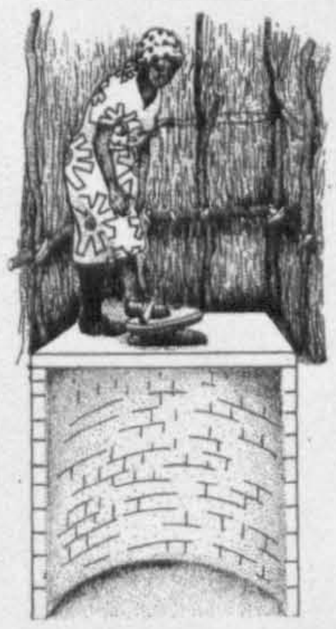


Traditional

3b

Improved traditional

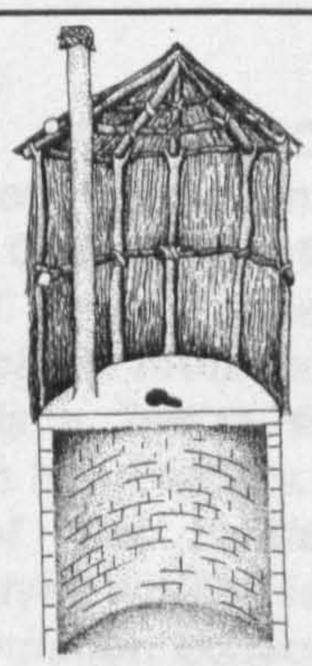
3c



Covered latrine

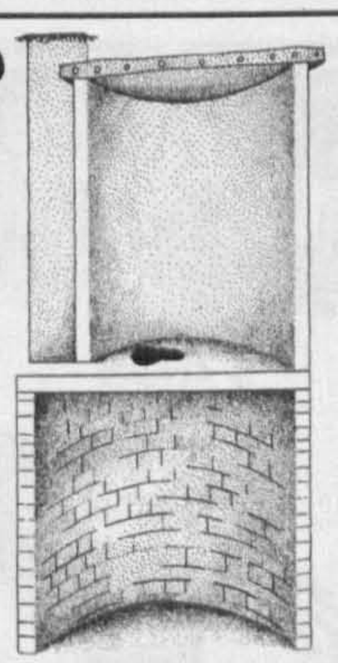
4. BURIED AND VENTILATED

4a



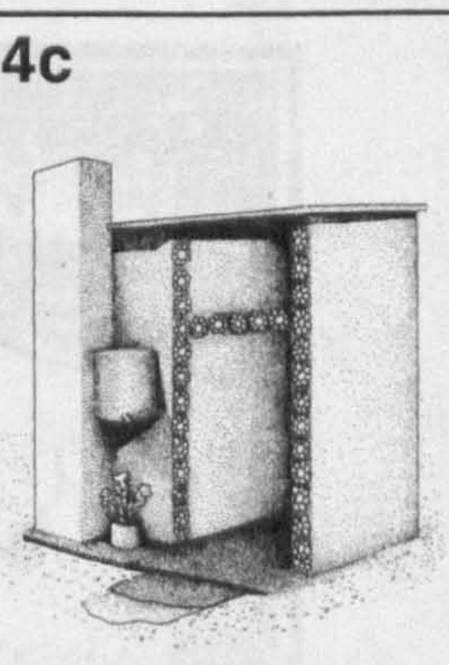
Ventilated latrine

4b



Ventilated & Improved

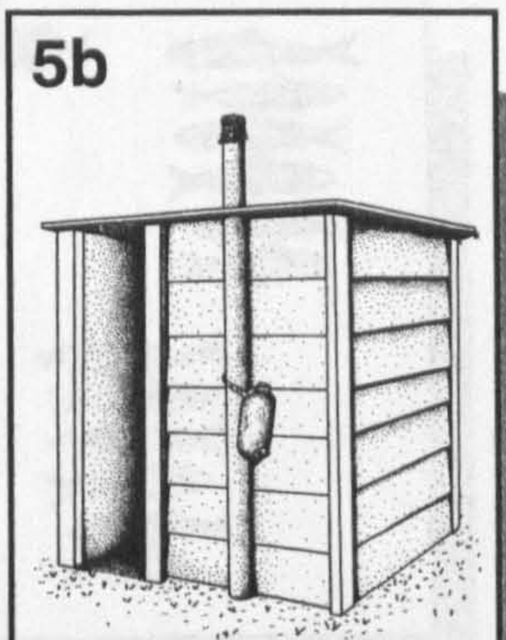
4c



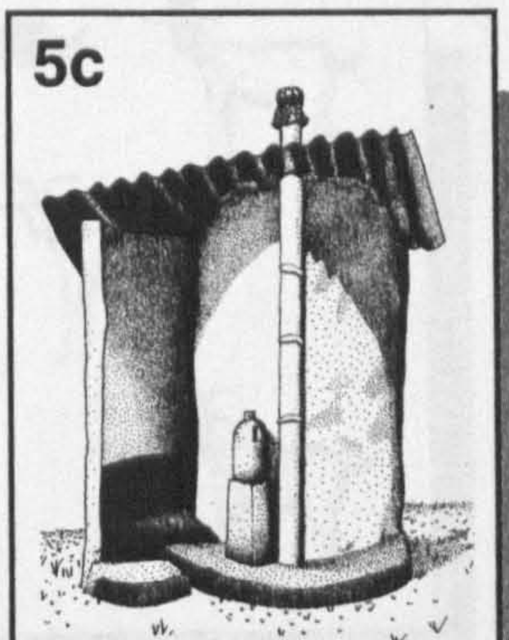
Improved Traditional

Set No 12: Sanitation Ladder (Contd)

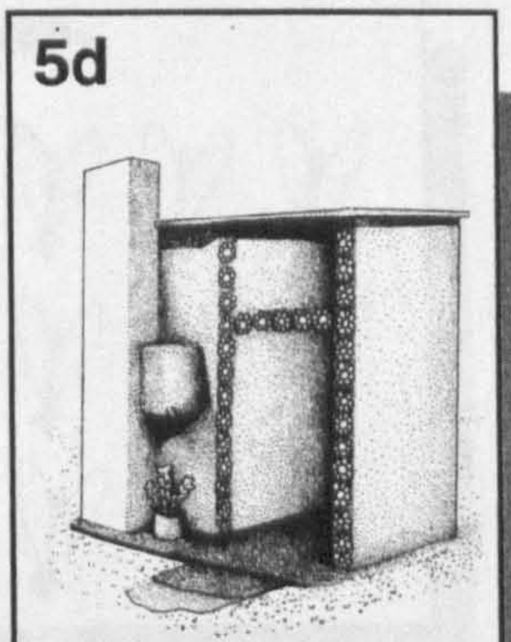
Pole and Dagga



Pre-cast concrete



Spiral cement



Brick and roof slab

Whilst the Blair Latrine (VIP) is the recommended technology in Zimbabwe, there is a growing realisation that the gap between no sanitation and the ultimate latrine (No 5D), is too big a jump for the average rural householder's budget. Therefore in Zimbabwe A.H.E.A.D projects, an upgradable approach is now practised whereby members can progress from a lined pit and slab, with temporary superstructure to the conventional Blair Latrine. From a hygienic viewpoint, the most important aspect is to cover faeces properly, and for some communities Cat Sanitation is the first stage.

Zimbabwe A.H.E.A.D's sanitation projects aim primarily for a secure pit-lining and a safe, washable slab, with communities completing the superstructure themselves in the most appropriate way. (5A) In areas where pits collapse easily, 'Tree Latrines' are a temporary solution. Shallow pits are dug and lined with poles. When they fill, the faeces become a resource as a fruit tree is planted on the site whilst the slab is then moved to the next pit. (See Set 11. "Tree Latrines" Nos 11 & 12) Meanwhile permanent pits are lined by women members themselves using interlocking cement blocks.

Badza stand and bottle

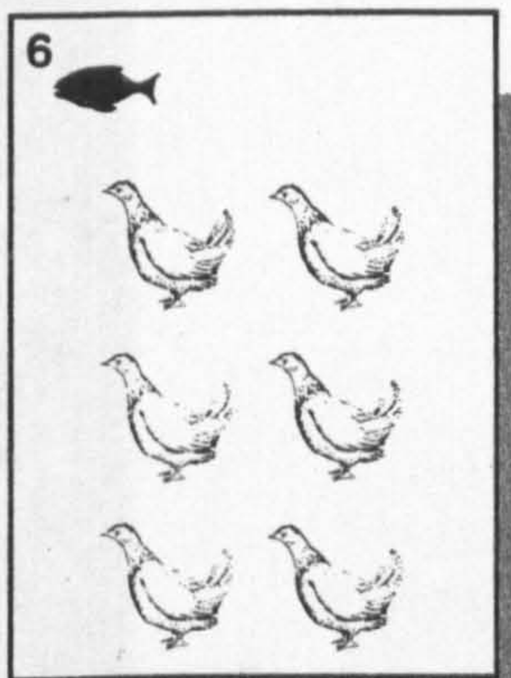
Hand washing stand

Bucket and ladle

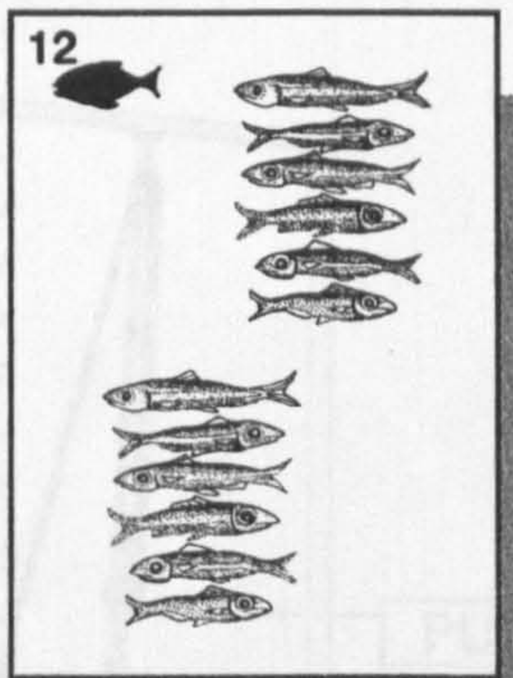
PUTTING LESSONS INTO PRACTISE
Handwashing is one of the interventions most emphasised in Community Health Clubs. A feature of every household belonging to a club member in Tsholotsho District is a 'badza stand' and homemade wash hand facility. This institutionalisation of 'Cat Sanitation' was a club initiative which is an indication of how sanitation consciousness has taken root in this community.

Set No 13: Nutrition

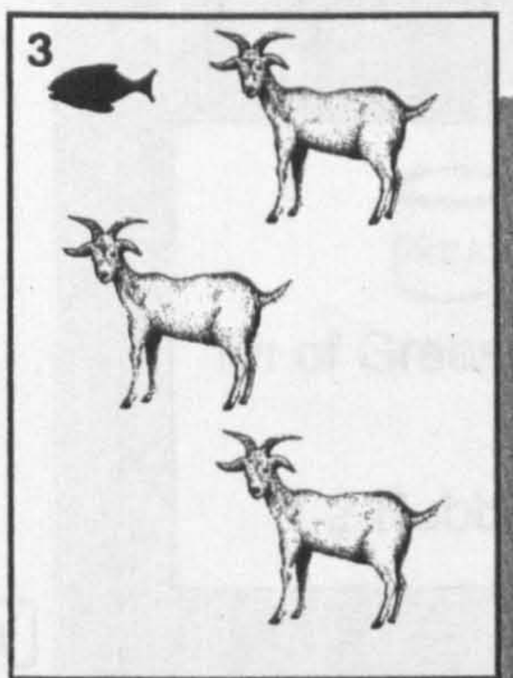
Illustrated by: J. Waterkeyn / K. Makurumure, 1998



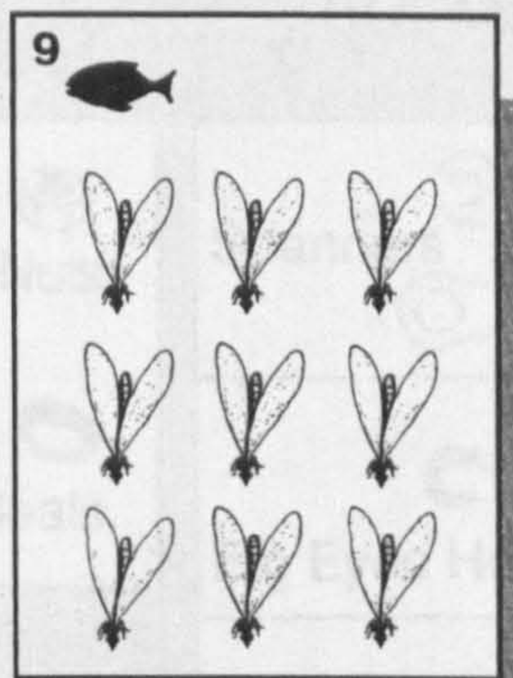
Body building food
Chicken



Body building food
Kapenta

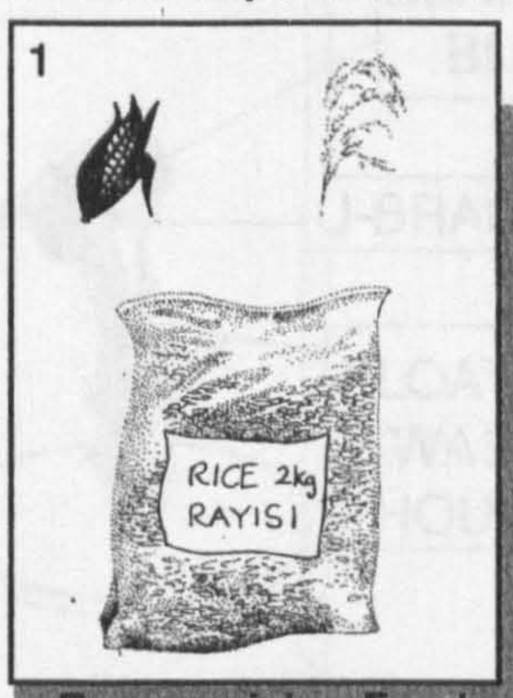


Body building food
Goat meat



Body building food
Flying ants

Energy-giving Foods
Maize meal



Energy-giving Foods
Rice

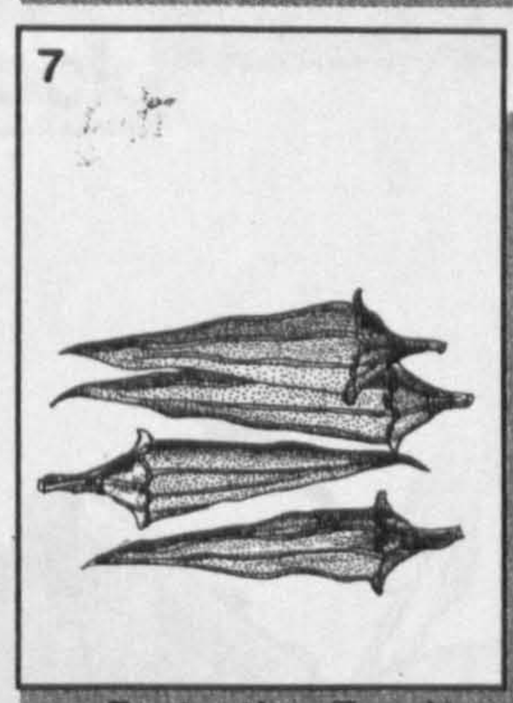
Energy-giving Foods
Sweet potatoes

Energy-giving Foods
Peanut Butter

Protective Foods
Onions

Protective Foods
Cabbage

Protective Foods
Wild cucumber



Protective Foods
Okra

Protective Foods
Cream of Tartar

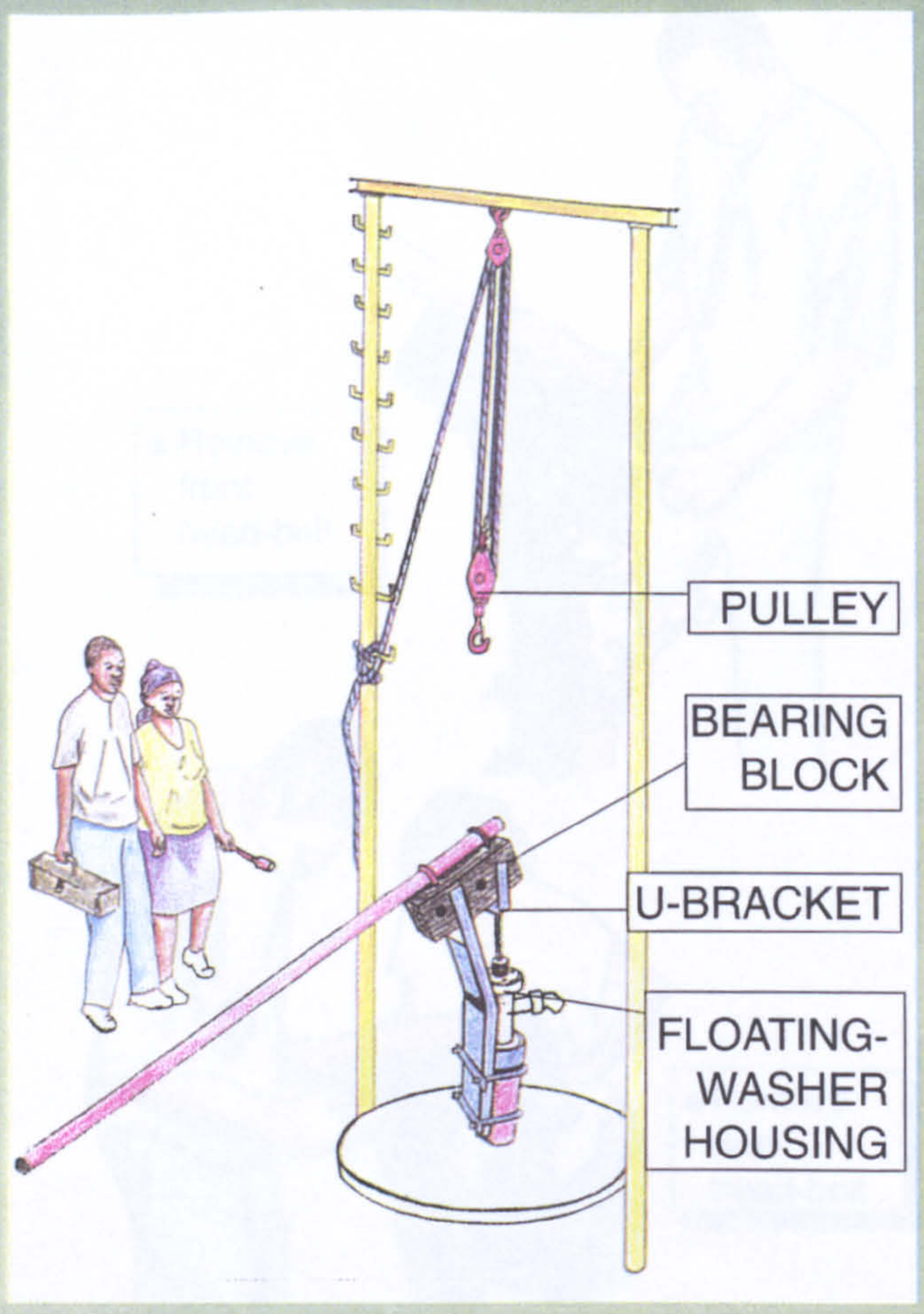
Protective Foods
Grenadilla

Protective Foods
Pineapple

Protective Foods
Mango

Above is a sample of a set of playing cards with 4 suits of 12 cards each, comprising of Body-building foods, Energy giving and Protective foods, with instructions on how to play the 'Balanced Meal Game' and 'Get Rid of the Fly Game'.

Routine Maintenance For Extractable Bush Pump



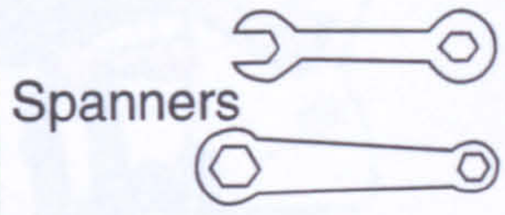
Spares

Tin of Grease

Nuts

2 Rubber Seals

Tools



Spanners

Big Eyed Hook

Rod Holder

Rod Retriever

Rod

Suppliers

V & W Engineering & Installations (Pvt)Ltd.
Cnr Leyland & Watts Road, Harare.
Tel. 664365, 663417

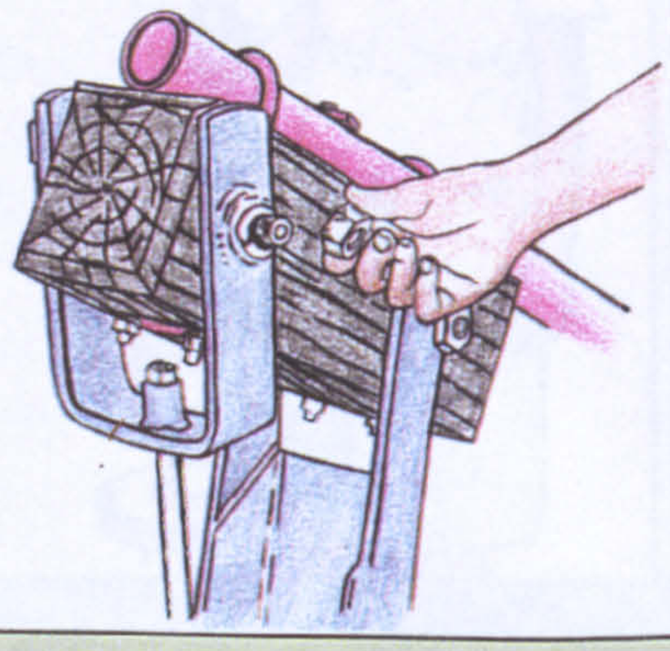
A. B. Mining & Equipment Supplies.
3rd Flr, Beverley B.lding.
15th Ave / Main St Byo.
Tel.76684, 64941.

Removing the Bearing Block

1

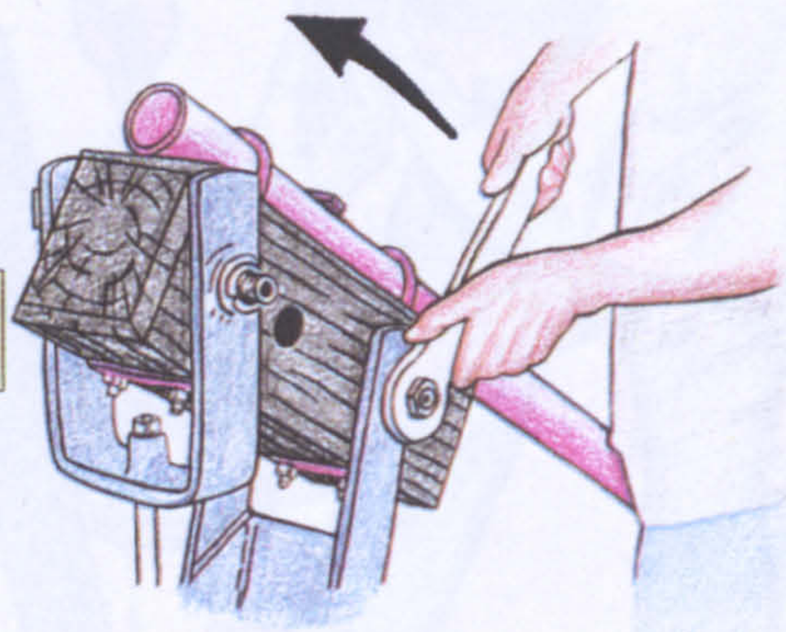
- Loosen front head nut .

- Remove front head nut .

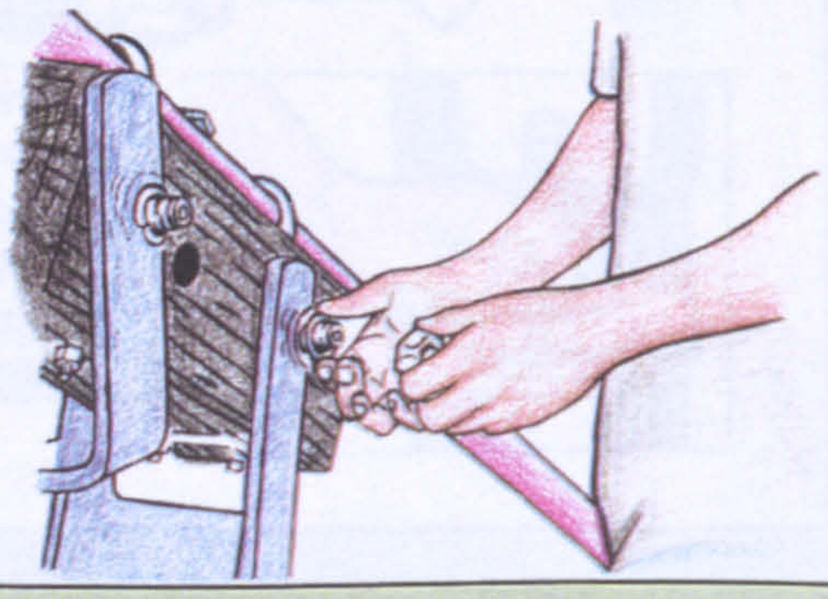


2

- Loosen rear head nut .



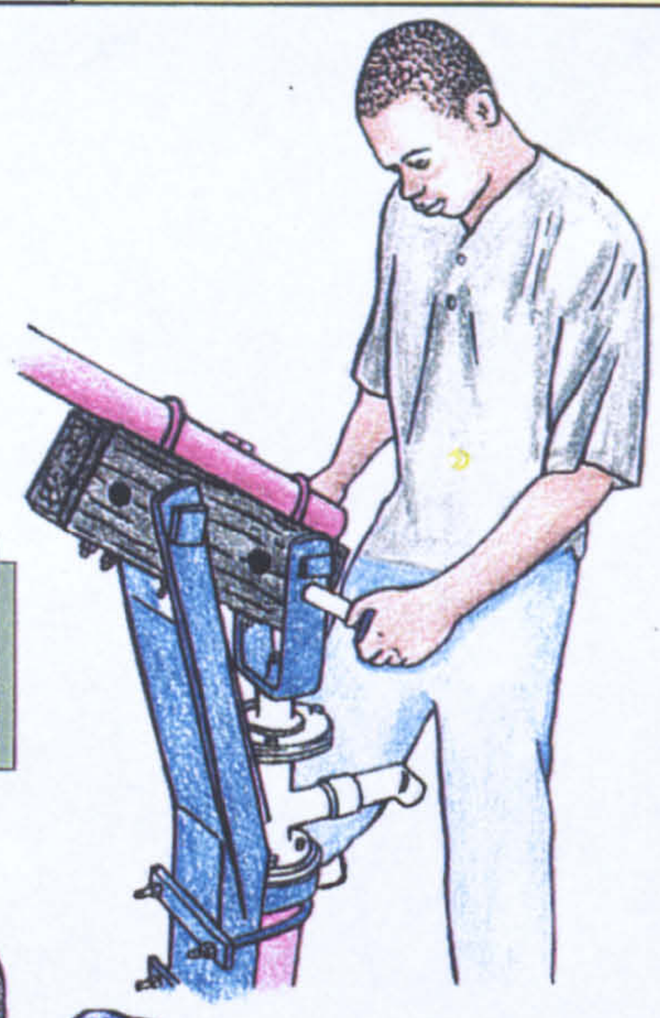
- Remove rear-head nut.



Illustrated by K. Makurumure. Funded by DFID.
Designed by J. Waterkeyn. Tel. 263-4-335172. Fax. 308977.
Produced by Zimbabwe A.H.E.A.D. Box MP1269, Mt. Pleasant, Harare.

Removing The Bearing Block

3

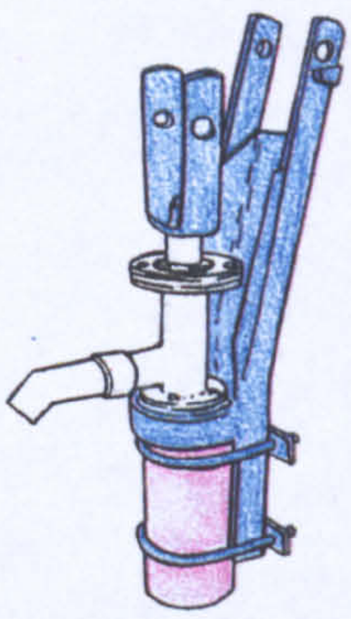


- Remove front head-bolt .

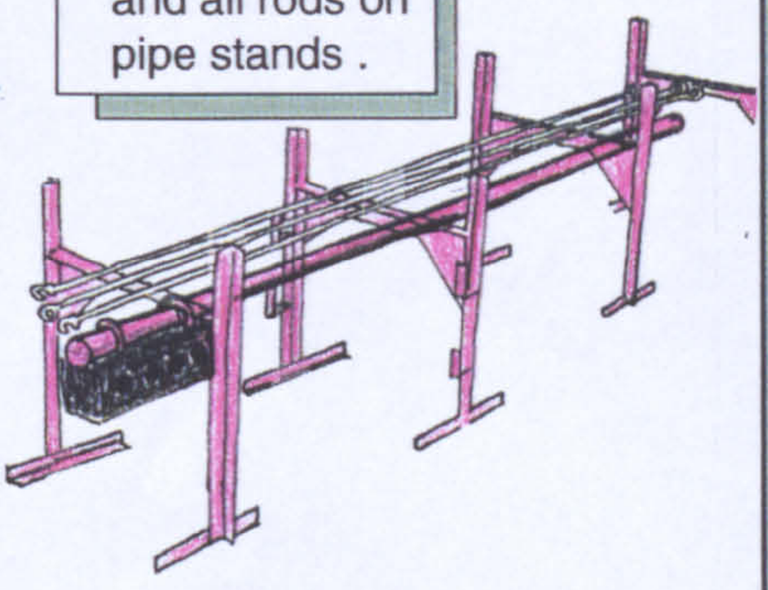
- Remove rear head-bolt .

4

- Remove bearing-block

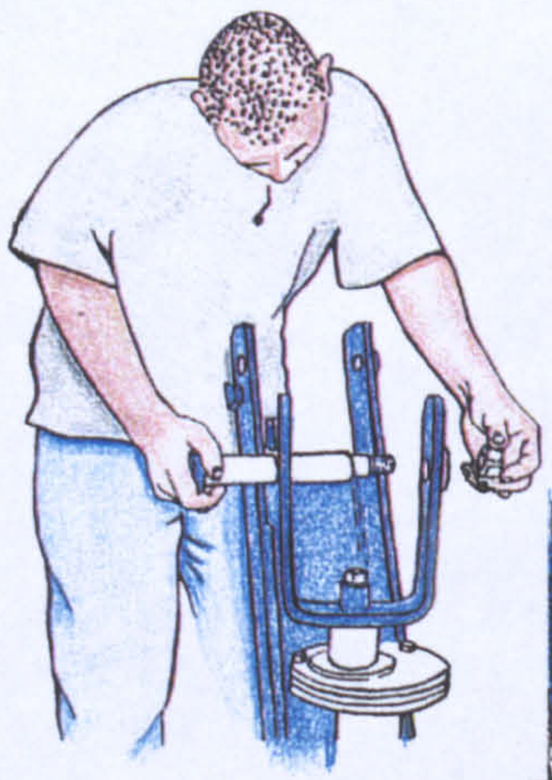


- Place the bearing block and all rods on pipe stands .



Pulling Out The Rods

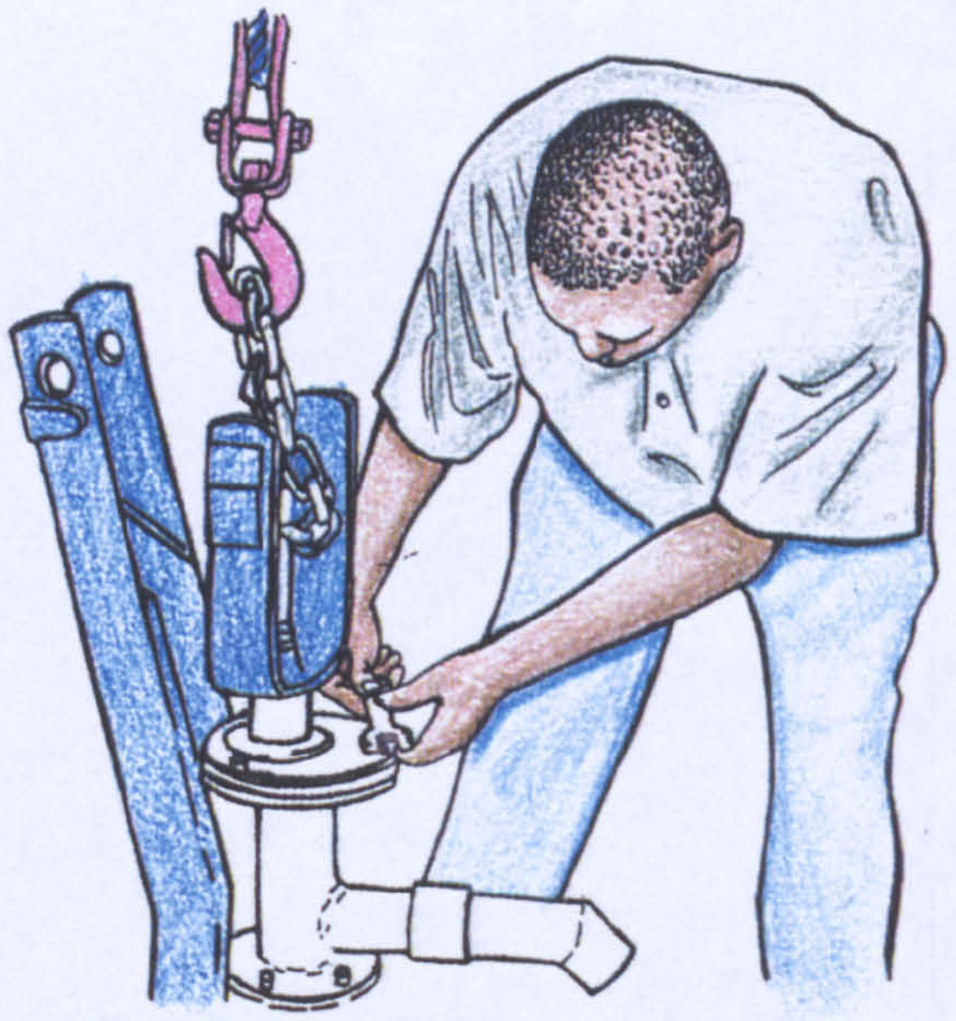
5



- Put a bolt into U-bracket and fasten

- Wind a chain or strong rope around the bolt and hook up to pulley.

6



- Loosen and remove nuts on floating washer housing